

# SOAP

## SANITARY CHEMICALS

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Plant and Laboratories: Bayonne, N.J.



*October 1942*

# For High Grade Soaps

**BUY**  
**HIGH GRADE**  
**CAUSTIC**  
**POTASH**  
**FROM**

CARLOAD • LESS-CARLOAD

TANK CARS • DRUMS

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for the  
Axis!*

Yes, dynamite . . . because this particular cording is earmarked for bundles of sanitary chemicals vital to maintaining the health of our nation.

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October, 1942

Say you saw it in SOAP!

3

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**ESSENTIAL OILS**

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Rosemary  
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**PERFUME BASES**

*for*

Soaps  
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**AROMATIC  
CHEMICALS**

# SPIKE LAVENDER ROSEMARY



Of special interest at this time are our spot stocks of Spanish Rosemary and Spike Lavender. We are direct importers and are in position to offer oils of pleasing quality. May we submit samples of these oils as well as any others in which you are interested?

In addition to offering a complete line of essential oils and aromatic chemicals we are headquarters for all types of perfume bases. Some of the products being perfumed by our laboratories are listed at the left. What perfuming problem do you have on which we may be of assistance?



## STANDARD SYNTHETICS, INC.

119 WEST 25TH ST., NEW YORK, N. Y.  
Chicago • San Francisco • Kansas City, Mo.

Volume XVIII

Number 10

# SOAP

*and*

## SANITARY CHEMICALS

Reg. U. S. Pat. Office

OCTOBER  
1942

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MEET A WARTIME NEED

• From American forests come these domestic products to help replace Rosemary, Siberian Pine Needle Oil, Thyme and Spike. All of these products are available, of high purity, constant of odor and stable in price.

**ISOBORNYL ACETATE, \$.80 lb.\*** A true pine needle self odor as well as a valuable piquant ester for use in compounds. It is stable in soap and especially useful as a deodorant in sanitary specialties.

**ISOBORNEOL, \$.90 lb.\*** Crystalline fixative of rich, deep odor which is a component of the odors of natural rosemary, spike, eucalyptus, thyme and other oils.

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**TERPINOLENE 2-2, \$.18 lb.\*** oil. Blend with Camphor Sassafrassy oil.

\* Drum lot prices, F.O.B. New Brunswick, N. J.



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E. I. DU PONT DE NEMOURS & COMPANY (INC.), ORGANIC CHEMICALS  
DEPARTMENT, AROMATICS DIVISION, WILMINGTON, DELAWARE





*Do you use ammonium salts?*

*Maybe you should consider*

## **AMMONIUM THIOCYANATE**

(AMMONIUM SULFOCYANIDE)

Here is a newly-available ammonium salt with interesting possibilities introduced by the thiocyanate group.

If you are now using an ammonium salt in your processes . . . such as chloride, acetate, oxalate, carbonate or nitrate . . . perhaps you will discover valuable modifications by substituting ammonium thiocyanate.

It is worth testing in your laboratory.

Ammonium thiocyanate has a behavior similar to other ammonium salts, but it also brings you all the variations of the thiocyanate group.

This group is remarkably stable and, in many reactions, resembles the halogens.

Koppers has recently placed in operation a large commercial plant for the production of ammonium thiocyanate crystals and can now offer this chemical in quantity at substantial savings over former costs. Koppers can supply ammonium thiocyanate in crystal form having a minimum purity of 95%.

Test samples, quotations and other information sent on request.

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**TAR AND CHEMICAL DIVISION**

**PITTSBURGH, PENNSYLVANIA**



**....AND THERE'S QUITE A DIFFERENCE**  
*in Soap Perfuming, too!*

The creating of soap perfumes at best, is a specialist's job. It requires a happy combination of soap technician and master perfumer, plus long experience. These days, with fewer materials to choose from, the job is doubly difficult. So depend on a competent perfumer whose experience in the soap field is broad, to solve your problems in soap scenting. Our perfumers are rich in such specialized experience.

VAN AMERINGEN - HAEBLER, INC. ★ 315 FOURTH AVE., NEW YORK CITY



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this news is HOT**

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1201

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CD63 53/52 DL=CHICAGO ILL 16 432P

1942 OCT 6 PM 4 45

TO ALL SANITARY SUPPLY JOBBERS=

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THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING IT

**HY-O-LAN**  
SUPER DUTY POWDERED  
**HAND SOAP**  
BLENDED WITH LANOLIN



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In America's arsenals, factories, ships at sea . . . they're clamoring for a soap that's gentle enough even for women workers—but cleans out deep dirt faster than liquid soaps. . . . Uncle Sam is in a heluva hurry—minutes mean bombers.

To meet this unprecedented demand, we brought out HY-O-LAN nine months ago. To date, jobbers' sales have spiraled to gold-rush proportions—and we're still shipping all you can sell.

**WIRE OR CLIP  
COUPON FOR  
SAMPLE**



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58 E. Cullerton St., Chicago

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Firm .....  
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Street ..... By ..... 8-10-42

# Javonella

Perfect for Perfuming  
★ LAUNDRY SOAPS ★ WASHING POWDERS ★ LIQUID CLEANSERS ★ POLISHES, ETC.

**E**VEN when oil of citronella was low in price and easy to obtain, JAVONELLA was a reliable favorite. A great many manufacturers preferred its finer, cleaner odor, its uniform quality and consistent economy. And now that Citronella is so high in price and difficult to get, JAVONELLA is more important to you than ever before.

WRITE FOR SAMPLES  
AND QUOTATIONS

**FELTON**  
**CHEMICAL COMPANY**  
599 Johnson Ave., Bklyn, N. Y.  
BRANCHES IN PRINCIPAL CITIES



Manufacturers of AROMATIC CHEMICALS, NATURAL DERIVATIVES, PERFUME AND FLAVOR OILS



*Your fabricated  
compounds...*

**ARE  
BETTER,  
MORE EFFECTIVE,  
SAFER**

*when made with*

**Built Soaps and Detergents  
for Laundries**

**Metal Cleaning Products**

**Cleaning Compounds for  
Buildings, Factories,  
Garages, Hotels and  
Institutions**

**Cleaners for the Food  
Processing Industries**

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**WRITE**  
for descriptive  
booklet!



## Check THESE ADVANTAGES

- ✓ Greater Soil Suspension
- ✓ More concentrated alkalinity safely controlled
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- ✓ Higher Bacteria-destroying power

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LOCKPORT, N. Y. • MARSEILLES, ILL.  
DALLAS, TEXAS

**General Offices • PITTSBURGH, PA.**

**T**

hese are times

when the

perfumer



often must make one pound

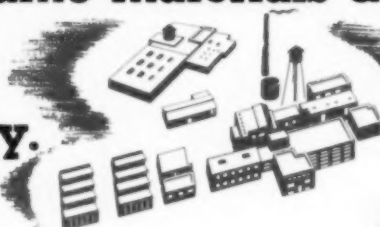


of perfume materials do the



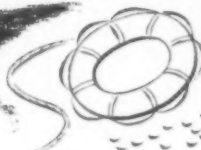
work

of many.



Here is where Givaudan

may be able to help you



. While we

cannot do the impossible

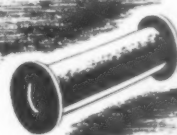


, we may know

some possibilities that escape you.

**4**

example, we have developed

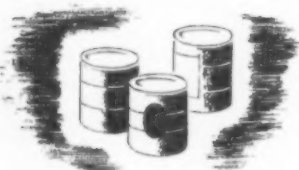


a fairly complete line



of artificial es-

sential oils




. These,

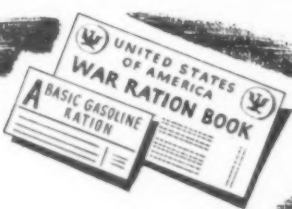


Givaudan's

**GIVAUDAN-**

comprehensive line of aromatic  chemicals,

you will find real aids  in supplementing


restricted  supplies of raw materials.


 In addition , Givaudan can offer

a broad background  of practical

experience  in developing new

 products and in improving

those already at hand . We would

welcome  an opportunity to help with

your manufacturing  problems.

**D**ELAWANNA, INC.

330 WEST 42ND STREET, NEW YORK, N. Y.

# COLUMBIA CHEMICALS

... EVEN IN  
THE DEFENSES  
OF THE *Sky*

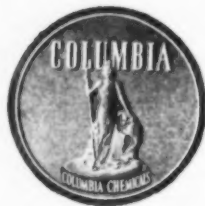
In the fabrication and flying of barrage balloons as well as in the making and operation of a wide range of other war weapons for land, sea and sky, COLUMBIA CHEMICALS play a vital role. They assist in speeding production, improving the quality. And they contribute importantly to the attainment of new and better standards of performance. Thus, today, you'll find COLUMBIA CHEMICALS being relied upon as essential aids in the manufacture of rubber, steel, munitions, chemicals, textiles, soap, paper, foods, drugs . . . practically everything our armed forces use or wear. That's why, if you, right now, have a need for basic chemicals, a need that is vital to victory, you will find it advantageous to call upon COLUMBIA. Here, as always, deliveries are as prompt as the most efficient use of current transportation facilities will permit.



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CALCIUM CHLORIDE • SODA BRIQUETTES  
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CALCENE\*\* • CALCIUM HYPOCHLORITE

\*Precipitated Calcium Silicate \*\*Precipitated Calcium Carbonate



## PITTSBURGH PLATE GLASS COMPANY

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GRANT BUILDING, PITTSBURGH, PA.

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## *Scarcity of floral oils . . .*

Present dwindling supplies of natural floral essences emphasize the value of high quality substitutes.

Synthetic floral essences can be used to replace the natural oils with full satisfaction and marked success in numerous products,—toilet soaps, shampoos, shaving creams, powders, creams, and many others.

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253 E. 4th St.

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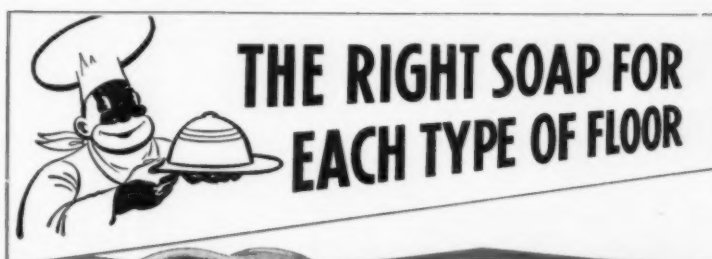
## "FLORAL" ODORS NATURE NEVER KNEW

Among the many interesting new developments in the Dow laboratories is a series of intriguing odors which have no specific counterpart in natural flowers. Though we call them "floral" odors, they are actually distinctive and original chemical formulations. Truly, they are "floral" odors Nature never knew.

These aromatic chemicals are the result of long and careful research and, not infrequently, the product of some fortunate combination of new materials. Many of them will some day be important members of the Dow aromatic group, and it is our sincere hope that they will prove helpful chemical tools for perfumers and formulators.

 **Synthetic Aromatics**

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New York City • St. Louis • Chicago • San Francisco • Los Angeles • Seattle • Houston



## APPROVED

By The Rubber Manufacturers' Association, Inc.

"BUCKEYE" PLAIN LIQUID FLOOR SOAP

"BUCKEYE" SASSAFRAS LIQUID FLOOR SOAP

"BUCKEYE" WAX CLEANER

"BUCKEYE" SPECIAL RUBBER CLEANER

will again appear in the list of approved cleaners  
issued by The Rubber Manufacturers' Association,  
Inc.

It's good service to sell the right cleaner  
for the right surface. Different types of  
floors require different cleaners for proper,  
economical maintenance. Davies-Young  
soaps are each specifically compounded for  
certain types of floors. In addition to the  
four products listed at left, Davies-Young  
Floor Soaps include

"EX-ALK" Liquid Cleaner (controls  
alkalinity)

"SANI-SCRUB" Liquid Soap

"FLOREX" Liquid Detergent.

We will be glad to suggest recommenda-  
tions for particular kinds of floors.

**THE DAVIES-YOUNG**  
**SOAP COMPANY**  
**DAYTON • OHIO**

THE DAVIES-YOUNG SOAP CO.  
Dayton, Ohio

Please send us samples, descriptions and prices of  
Liquid Floor Soaps.

Name .....

Address .....

City and State.....

# INDEX

## TO A PERFECT BATH CRYSTAL BASE

### Check

over these characteristics of Solvay Snowflake Crystals as the perfect bath crystal base. You'll find that Snowflake is a product no other base can equal.

**FOR SALES APPEAL**—Snowflake Crystals have that! Tiny, beautifully delicate crystals that women can't resist!

**FOR COLORING AND PERFUMING**—Colors add beauty to an already beautiful product. Absorbs dyes readily and quickly. Perfumes take perfectly. There is absolutely no "basic" odor to overcome.

**FOR READY SOLUBILITY**—Use Snowflake. Dissolves almost instantly. Nothing to "rub" on the bottom of the tub!

**FOR SOFTENING WATER**—With Snowflake, water is so soft that it feels like velvet! Ordinary bath crystals *harden* the water!

**FOR MILDNESS**—Snowflake is a pure crystalline product that will not harm or irritate the skin!

**FOR DETERGENCY**—Snowflake cleanses the skin. Makes soap clean much better!

**FOR STABILITY**—Non-caking. Does not change chemical composition or physical appearance!

**FOR FREE FLOWING**—Ideal for use in machines!

**FOR LOW COST!**—A few cents per pound!

**FOR BULLETIN**—Write for Bulletin No. 224-B "Manufacture of Bath Crystals from Snowflake Crystals."

**SPECIAL BULLETIN! TELLS HOW TO PERFUME AND DYE SNOWFLAKE FOR BATH CRYSTAL BASES. FILL IN COUPON!**  
A special bulletin tells you the details on how simple and easy it is to perfume and dye Snowflake Crystals for bath crystal base. Don't miss this profit making opportunity . . . **SEND FOR THIS BULLETIN NOW! FILL IN THE COUPON TODAY!**

**SOLVAY**  
*Snowflake Crystals*

SOLVAY SALES CORPORATION • 40 Rector Street, New York, N. Y.

Gentlemen: Kindly send me a copy of Bulletin, "How to Manufacture Bath Crystals from Snowflake Crystals!"

Name.....

Company.....

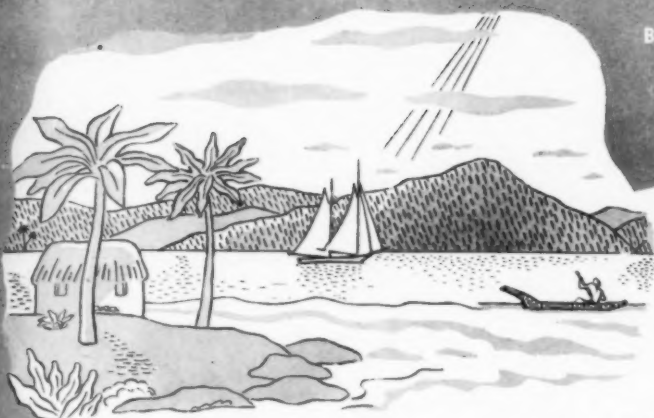
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City..... State.....



AROMATICS FOR SOAP

BY ALBERT VERLEY & COMPANY



HIGH COSTS AND SCARCITY  
CAN'T GET YOU DOWN—WHEN YOU USE

## Bergamot Artificial "V"

and other new creations, to maintain quality and prestige

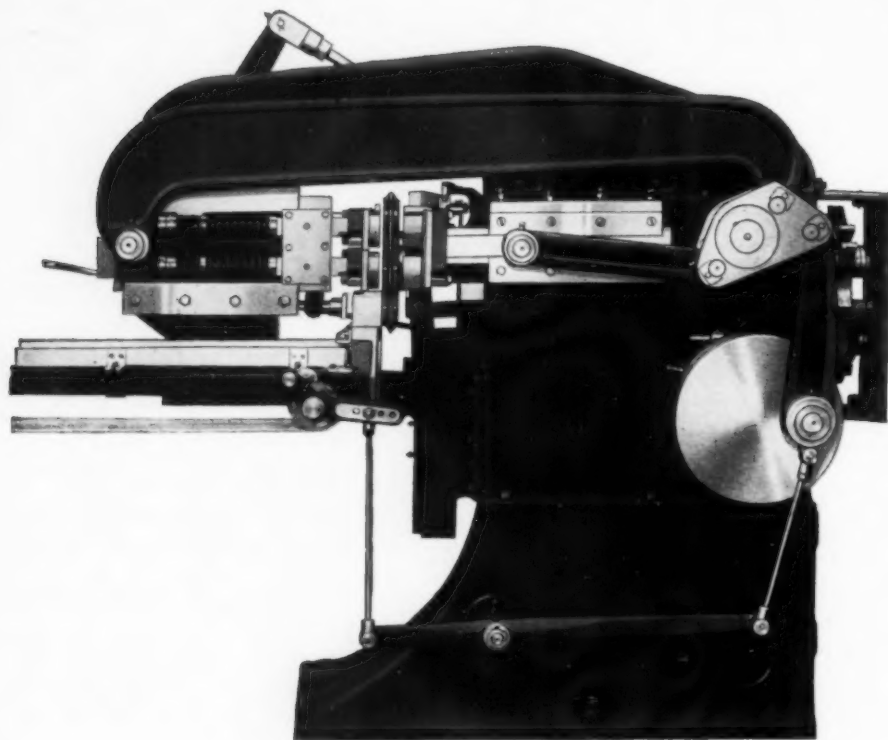
Like Geranium and Lavender, natural Bergamot is scarce and expensive—but today you can remove all three from your "critical" list. Bergamot Artificial "V" and its companion products are thoroughly satisfactory substitutes—making it unnecessary for you ever again to undergo the risks of a foreign source of supply. • You realize when you make your own examination of a working sample, what tremendous advances have been made in the synthesis of these important products. Write for yours today; also ask for quotations—which other soapmakers are fitting readily into their cost formulas.

FOR THOSE WHO  
MUST HAVE THE  
NATURAL PRODUCTS

— Albert Verley &  
Company still has stocks  
of many natural essential  
oils for soap . . . Write for  
working samples and prices.

*Albert Verley & Co.* AROMATICS  
ALBERT VERLEY AND COMPANY, 232 E. OHIO ST., CHICAGO, ILL.  
114 E. 25TH ST., NEW YORK  
MEFFORD CHEMICAL COMPANY, LOS ANGELES

**... laundry soaps too**  
**... sell better if they look better**



TYPE K

## **JONES SOAP PRESSES**

... insure for your laundry soap that finished appearance which connotes fine quality ... turn out 90 to 140 cakes per minute ... run to capacity by one operator ... toggle operated, hence powerful, perfect pressing without noise or vibration ... results and economies which you cannot obtain with presses of obsolete vintage ... yes, sir,—laundry soaps as well as fine toilet soaps need the sales advantage of good looks ... JONES modern toggle operated PRESSES are the answer.

**R. A. JONES & CO.**

Incorporated

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The Standardized Constant Motion and Nova Motion Cartoners package bottles, jars, tins, collapsible tubes and many other articles. They feed, fold and insert direction sheets and corrugated board liners with the loads.

# EDITOR

**U**SE of fats and oils in soap manufacture is now limited by War Production Board order. Anticipated for the past four or five months, the order was issued on September 22 and was made retroactive to September 1. Except for domestic vegetable oil foots and fatty acids made from these foots, soapers are restricted to 90 per cent of their own use of all fats and oils quarterly based on averages for 1940 and 1941. But for foots and their fatty acids, the corresponding figure is 119 per cent. Thus the aim is to encourage a wider consumption of foots and fatty by-products in the soap kettle, while the object of the limitation order as a whole is, according to the stated purpose of W.P.B., to build a reserve supply of fats and oils.

The quotas as fixed in the new W.P.B. order do not apply to any particular fats and oils, but to the totals of all oils used. Where there have been limitations on certain oils in the past such as coconut, these remain unchanged. The order is also flexible in other respects such as carrying unused quotas over from quarter to quarter provided they are not carried forward beyond June 30, 1943 or the same date of succeeding years.

Although soap manufactured for the Army and Navy or other government agency must be made from fats and oils subject to quota limitations, soap for Lend-Lease is wholly exempt from quota restrictions. This, it seems to us, is somewhat unusual, but possibly explainable by facts of a military or political nature with which we are not familiar.

Now as to the 90 per cent figure,—this seems indeed quite liberal. Whether it is

to curb future runaway soap production such as we experienced late last year and during the first quarter of 1942, or is just to set up fat and oil quota machinery,—by which, quotas at a later date could be reduced sharply and quickly,—is not known to us. But offhand it does not look like a figure aimed to build up a fat reserve in a hurry,—if we need to build such a reserve for war purposes.

Use of fats and oils by soapers in 1940 and 1941,—the years on which the 90 per cent is to be calculated were really big fat-consuming years. In 1941, soapers used close to 2,250,000,000 pounds of fat, a jump of 25 per cent from 1940. During the two years, 1940-41, soapers probably used more than four billion pounds of fats and oils, the largest two-year period in history. Ninety per cent of this is a lot of fat in any language. Now add the oils and fats which may be used to make Lend-Lease soap. Even though 1942-43 domestic oil and fat production figures show a sharp increase, this total of fat for soap is still sufficiently high to make us wonder what the limitation order will accomplish.



**N**OW, to give some further thought to soaps for Lend-Lease which can be made from quota-free oils and fats while soaps for our Army and Navy must be charged against fat quotas, — this has brought rather sharp comments from soapers out and around the country. But maybe it is not as bad as it looks. That Lend-Lease is obligated to supply Russia with a fairly large tonnage of soap has been rumored



around the industry for the past several months. That such shipments might be an "out" for excess soap produced actually as a by-product in keeping glycerine production at maximum figures, is possible, and such a plan may be behind the W.P.B. order.

There is one thing, however, that W.P.B. may have overlooked, and that is the tremendously increased quantities of special soaps which the Army and Navy are taking regularly to clean their ever expanding supply of planes, boats, buildings, gear and other equipment. It is conceivable even with a 90 per cent quota that manufacturers of potash soaps and other specialties might not be able to supply the armed forces with their needs of these products, even though the country's tonnage of soaps as a whole might be adequate. It would seem to us that there should be no restrictions within the range of good sense on Army and Navy demands for any type of soaps which they may require. Has W.P.B. considered this angle of the situation?



**O**IL and fat production in the United States from domestic materials will approximate twelve billion pounds in 1942-43, a jump of twenty per cent from 1941-42, according to estimates recently released by the U. S. Department of Agriculture. This figure, the Department states, is sufficient not only to make up for reduced imports of fats and oils due to the war, but to cover anticipated expanded exports under Lend-Lease.

In less than a year after the declaration of war, the United States shows an estimated increase in its fat and oil output of twenty per cent! Probably under greater pressure, the increase could have been even larger, limited only by the crushing capacity of the country. These figures should put at rest tales of an approaching oil and fat shortage, and of a soap and glycerine shortage as well. As we have contended for some time, the maximum oil and fat production capacity

of the United States has really never been fully tapped, and probably could in an emergency be pushed even higher than the estimates for 1942-43.



**T**HE attitude of O.P.A. toward advertising, in this case specifically soap advertising, was indicated quite clearly last month in a bulletin sent out by the American Association of Advertising Agencies. Criticizing the O.P.A. for its roll-back of tallow prices a couple of months ago, Congressman H. P. Fulmer, chairman of the House Committee on Agriculture, stated subsequently that this would enable soap manufacturers "... to continue to make their usual large profits ... to advertise in the press, over the radio and any other method whereby they might be able to increase their sales and their cash surpluses ..."

In answer to this, Leon Henderson of O.P.A. stated that an investigation by his department showed that "... the margins between the March ceiling prices for tallow, fats and greases and the 'rolled-back' prices of the soap manufacturers were inadequate to the maintenance of necessary soap production ... the reduction (in tallow prices) was a necessary step ... based entirely on our own investigation into the costs and profits of the manufacturing companies ..."

In regard to advertising costs, Mr. Henderson said: "In line with our previously announced policy, normal advertising layouts were considered as costs in this investigation. Any other policy with respect to advertising might well result in the destruction of the entire advertising industry, an end that is beyond either the authority or the inclination of this Office."

Not only does this clarify in the minds of manufacturers the attitude of O.P.A. toward normal advertising expenditures, but it likewise shows that the average farm congressman, either with or without the true facts, will never pass up a chance to take a pot shot at industry.



# CONTAINER OUTLOOK...

LAST year, raw materials were the big problem for the average manufacturer of soaps, detergents, cleaners, insecticides, disinfectants, waxes, and allied chemical specialties. Today, containers and packages of one sort or another have moved into first place as the Number One problem facing these manufacturers. Steel drums and pails, cans, barrels, bottles, carboys,—these represent the real headache for manufacturers at present. With the notable exception of paper wrappers and boxes, and shipping cases for regular laundry and toilet soaps,—luckily representing the bulk of the tonnage of soap shipments,—all types of containers for the group of products listed above are either difficult to buy or are subject to limitations by the W.P.B.

The anticipated shortage of paper and paper packaging materials,—original estimates a year ago stated that soapers would have to cut their use of packaging papers at least 25 per cent, maybe 40 per cent,—has not developed. To those producing toilet, laundry, chip, flake and similar soaps, this has meant one less problem. The anticipated shortage of steel and tin *has* developed, and this naturally means greater and greater curtailment in the use of steel drums, pails and cans for liquid and soft soaps, floor soaps, insecticides, disinfectants, waxes, polishes, cleaning fluids, and similar chemical specialties.

Slowly but surely, the W.P.B. is drawing its restrictions on the use of metals for containers tighter and tighter. If the war continues sufficiently long, this may mean eventually a complete switch away from metal to wood, fibre and glass containers of one type or another. But such a switch will not come overnight in spite of W.P.B. orders already issued, and many metal drums, pails and cans now in use will probably still be in use a couple of years hence. Even

How W. P. B. packaging limitations will affect manufacturers of soaps, insecticides, disinfectants, and chemical specialties

though new metal containers of any kind may eventually be eliminated for the duration, the switch to other types will be gradual, at least in the case of the larger sizes, as those drums and pails already in circulation outlive their usefulness. It seems clear that in view of the present steel shortage, the W.P.B. intends that *no more steel* go into any kind of container unless it is vitally necessary for the packaging and shipment of materials essential to the war effort and which materials cannot because of their character be packaged in anything but steel.

In the light of numerous questions from manufacturers, jobbers and repackers of soap products, sanitation and chemical specialties, a resume of the container situation as it affects these groups may clear up some uncertainties and misunderstandings of which there appear to be many in the trade. Several volumes could be written on the subject and comments here must of necessity be brief and not always complete. In some instances, the situation itself is so clouded that container manufacturers as well as buyers do not know exactly where they stand. In any case, it would appear to be W.P.B. policy thus far to permit manufacturers and repackers of soap and sanitation chemical products as well as other manufacturers to *use up containers already on hand*, irrespective of size or type, and to re-use such as may be re-used still worn out, and *not to freeze* such stocks of containers.

**CANS**—As far as the small can, that is 6 oz., 8 oz., pints, and quarts, is concerned as a package for fly sprays, polishes, disinfectants, soap and cleaner specialties, it is no longer available from can manufacturers. This applies to tin and terne plate cans by order M-81 of W.P.B. and to black plate cans by order M-136. Black plate cans (plain steel cans without tin or lead coating) *can still be supplied* for these products by can manufacturers in sizes of 1 gallon up to 5 gallons. These black plate five-gallon cans may act as a satisfactory and lower-cost substitute for five and ten-gallon steel pails which no longer can be purchased either new or second-hand. (W.P.B. Order L-197; Sept. 14.) Most manufacturers of fly spray, disinfectants, floor waxes, liquid soaps and cleaners heretofore packing in tin cans have already made arrangements to switch to pint and quart glass bottles. Some believe that the one to five gallon black plate cans will sooner or later be restricted and are considering switching to gallon bottles and carboys. This latter, however, may run into conflict with fire laws in certain cities.

**STEEL DRUMS**—In this classification fall all steel containers used by manufacturers of soaps, insecticides, disinfectants, etc., that is any type of drum from 110 gallon capacity down and including all steel pails, kits, etc. of 5 and 10 gallon capacity. It

does not include the one to five gallon black plate cans still available. W.P.B. Limitation Order L-197, issued Sept. 14, bans the *further purchase* of any steel drums or pails, *new or used*, as of that date, for the packaging of a long list of products, many of which fall in the soap, insecticide, and sanitary chemical group. This list includes disinfectants, floor seal and floor wax, formaldehyde, liquid insecticides including fly spray, live stock dip and spray, lime-sulfur solution, oils and fats, pyrethrum concentrates, rotenone products, silicate of soda, liquid soaps and detergents, metallic soaps, wood preservatives, and others. All drums or pails *in the hands* of the soap or insecticide, etc. manufacturer on Sept. 14 may be used and re-used (on a returnable basis where title remains with the manufacturer), but no additional drums or pails, new or used, may be acquired. (The drum order states specifically . . . "which was manufactured, purchased or delivered on or after Sept. 14.")

The same steel drum order from W.P.B. places a *complete ban* on the packaging of many other products in steel drums or pails, new or used, under any conditions. This part of the order goes into effect 60 days after Sept. 14 which should be Nov. 13. Among the products which *cannot* be packed in steel drums *at all after Nov. 13*, even those drums already in the hands of manufacturers and jobbers, are included the following:—arsenic and arsenical mixtures, bordeaux mixture, bottle washing compounds, calcium arsenate, caulking compounds, chloride of lime, dry cleaning compounds, cooking fat compounds melting at 65 deg. F. or higher, copper sulfate, fatty acids, animal and vegetable greases, hydrogenated oils melting at 65 deg. F. or higher, lanolin and wool grease, lard, laundry alkalies, lead arsenate, lime, dry lime sulfur, paradichlorobenzene, paste cutting, drawing and grinding compounds, roofing pitch, scouring cakes and powder, dry silicates, soda ash, dry soaps and detergents, sweeping compounds, tallow, trisodium phosphate, waxes (not floor or polishing wax compounds), and wood fillers. No product not shipped in drums

prior to Sept. 14 may now be shipped in drums.

Study of the order reveals that glycerine is not on either list of restricted products. Soft and paste soaps are not specifically classified and are probably meant to be classified under the general heading, "Soaps and detergents, liquid," which permits packaging in steel drums already on hand or in re-use. Pyrethrum and rotenone concentrates are restricted to packaging in drums already on hand. It had been thought in the industry that in view of the basic importance of these materials, their scarcity, and vital necessity in insect control in the war economy, that they might be permitted the use of new drums. In some cases, a single 55 gallon drum of these extracts may be worth a thousand dollars or more, particularly where the higher concentrates are concerned. (See further discussion of this subject under wood barrels.)

The new steel drum order by W.P.B., L-197, the text of which is published on pages 57-59 of this issue, raises more prominently than ever the big problem of *drum return* by the customer. No shipper of large packages has to be told that this is the most vexing problem facing him today. Where manufacturers are permitted to use and re-use drums which they now have in their possession and which they own, L-197 points out that in order to insure the return of a drum, they must keep title to the container. In other words, it is merely *lent* to the buyer and under no conditions can it be sold irrespective of memorandum charges of other factors.

In order to preserve their drum supply as long as possible, there is no doubt but that manufacturers and other shippers are going to be forced to use drastic means to insure the return of their drums. The suggestion has been made that under the new conditions imposed by L-197, *further shipments of merchandise be refused* to buyers who repeatedly refuse to return drums or who ignore requests for their return. But with the usual seller-customer relations, this raises question of competition,—". . . if I don't ship him, somebody else will. If I get tough,

somebody else will steal away my customer, at least temporarily. If I get even tougher and institute replevin action to regain my drums, I will probably lose a good customer permanently. But if I don't get my drums back, I will soon be handicapped worse than ever, particularly if my competitors have a good supply of used drums on hand. So, what to do?"

The problem of enforcing drum return is easier for large companies than for small. The larger manufacturers have always been in a better position to enforce their regulations either in matter of credit, or drum return, or anything else. The memorandum charge at the levels permitted by the O.P.A. is of little or no help. Buyers who are hard up for drums will be willing to pay the memorandum charge to keep a drum. Shippers are not permitted to put a sufficiently high memorandum price on the drum to insure its return without deducting the higher drum figure proportionately from the price of the merchandise if the merchandise has been in the past sold on a drum-included basis,—and most soap products, insecticides, waxes, etc., have been sold on this basis for years.

As an aid to drum return, a few steps have been suggested which already may have been taken: 1. Send a letter to all customers explaining your position under the new order, L-197. 2. Explain in blunt language that you now insist that every drum must be returned. 3. Explain that you retain title to all drums shipped and that they are lent and not sold, given away or included with the contents. 4. Hint that you and all other manufacturers may be forced to suspend future shipments if drums are not returned. 5. Stencil all drums with the statement that they are your property and are merely lent to the customer and should be returned as soon as possible. All this may not do too much practical good, but it cannot do any harm.

**GLASS CONTAINERS**—As a result of the restrictions on metal containers, a tremendous demand for all sorts of glass containers has been thrown on the glass industry. As a

consequence, the readily available supply of some types of glass containers is restricted, but the glass manufacturers have been making every possible effort to take care of the needs of manufacturers. The heavy switch to glass by the food industries has, of course, been the major problem of glass manufacturers. At the same time, many products in the field of soaps, insecticides, disinfectants and chemical specialties have already switched to glass or are in the process of doing so. There are no W.P.B. restrictions on glass containers as yet.

At present, the W.P.B. has before it a recommendation of the Household and Industrial Insecticide Industry Advisory Committee that the packaging of liquid insecticides and fly sprays in certain sizes of glass be made mandatory by W.P.B. order. This recommendation which would restrict small sizes of fly spray packages to *pint and quart round glass bottles* with 28 mm. cap,—eliminating the 6 oz., 8 oz., 12 oz. and other special sizes which were formerly available in tin,—and the gallon size to glass bottles with 38 mm. cap, is likely to receive favorable consideration although it may be modified in some respects and extended to include other products before and if issued as a W.P.B. order.

A few manufacturers have already gone over to pint and quart amber bottles. One leading manufacturer is using an oval amber bottle, others round. The fixation of a single standard shape is not looked upon too favorably by some manufacturers who point out that moulds for other types are already available in the glass industry and that this close restriction on shape would not save in manufacture or in cost to the bottle buyer.

Probably any order by W.P.B. restricting bottle sizes would cover products other than fly spray which was all the original advisory committee recommendation covered. Inasmuch as small cans are not available for other allied products such as disinfectants, floor waxes, liquid soaps, cleaning compounds, etc., they are faced with the same enforced switch to glass. Their problems will also

have to be considered in any W.P.B. order issued and a restriction on shape might handicap many manufacturers in this group who have already arranged for supplies of glass containers.

In the case of fly sprays and other seasonal items, the average manufacturer is in a quandary as to what he should do in packaging his products for the 1943 season. The 1943 insecticide selling season is close at hand and some manufacturers have gone ahead with their plans. Others are waiting to see what the W.P.B. may do in the way of an order restricting sizes and shapes of bottles. The recommendation by the Insecticide Advisory Committee was placed before the W.P.B. on Aug. 18, but no action has been taken by the W.P.B. as yet although it is now three months past the time when insecticide manufacturers normally make packaging arrangements for the following year. For the manufacturer of small-package insecticides, who feels that he must go ahead, the path appears to be to pack in pint and quart round amber bottles if he has not as yet made other arrangements.

When it comes to the larger glass containers, one gallon bottles and up to the 13 gallon carboys, the problem becomes more complicated. Many insecticides, floor waxes, dry cleaning specialties, disinfectants, etc., fall into the classification of "combustible" or "flammable" mixtures and accordingly are subject to packaging restrictions both by the Interstate Commerce Commission and by fire laws in various cities. Where a one-gallon, five-gallon or ten-gallon can or steel pail might be permitted for shipping or storing fly spray or floor wax, for example, glass bottles or carboys of one gallon or larger might be restricted. Such is the case in New York and some other large cities. Hospitals, hotels, factories, institutions, railroads, etc., which have been in the habit of purchasing in the larger containers,—and where the pint and quart sizes are definitely unsuited for their use,—could not be supplied unless the fire laws were revised. This could conceivably mean changing the law in hundreds of American cities.

The same problem confronts not only shippers of larger units of insecticides, waxes, cleaning fluids, etc., but manufacturers of pyrethrum and other insecticide concentrates with a petroleum base which have heretofore been shipped in steel drums and pails only and who if their supply of drums becomes exhausted will be forced to turn to some sort of glass container. And if in addition, the myriad of shipping difficulties involved in these larger glass containers,—13 gallon carboys are largest available,—are considered, the complications of the problem are multiplied many fold. As long as one and five gallon black iron cans are available and manufacturers are permitted to use and re-use drums already in their possession, the acute stage of this phase of the container problem will be postponed. Before making the one-gallon glass container mandatory, the W.P.B. will undoubtedly consider the shipping fire-law features of the situation. In fact, the National Association of Insecticide & Disinfectant Manufacturers has already investigated this matter and plans to act promptly on fire law revision if the W.P.B. orders the use of glass for the gallon or larger sizes.

**CLOSURES**—In the adoption of glass containers for insecticides, waxes, disinfectants, etc., the main problem faced by manufacturers is an adequate supply of caps. Supplies of metal and plastic caps are not too plentiful and judging from the attempts of manufacturers to purchase them, are becoming more scarce. Standardization of caps at 28 mm. for all pint and quart bottles may be of some help in increasing the supply. The W.P.B. is loath to permit the use of additional supplies of steel for closures. A heavier load has accordingly been thrown on those types of plastic caps which are available. W.P.B. is studying the possibilities of wood, fibre and paper caps of various types and something of this character may be made available within the next six months to replace metal and plastic caps. Closure manufacturers are using every effort to supply caps in pace



with the switch to glass by many manufacturers and thus far have been successful in their efforts. However, a greater scarcity of closures impends unless new materials are successful in replacing metal and plastic.

**WOOD BARRELS**—Under the heading of wood barrels comes all of the wood containers, including kits and pails. Slack wood barrels for dry products are not considered here, only tight wood barrels of red or white oak or other hard wood suitable for shipment of liquids. First of all, the wide recommendations by the W.P.B. and other Government agencies made many months ago and repeated upon occasion since then, that manufacturers switch away from steel drums and use tight wood barrels, have had the inevitable effect. Producers of wood barrels, kits, pails and the like are literally swamped with orders. Some of them are sold far ahead and can accept no further business. It would seem that with some few exceptions those who are certain that wood barrels are suitable for their products have not hesitated to switch away from the steel drums which they have been using. There are no W.P.B. limitations on wood barrels and as yet, none are anticipated.

Recommendations by the W.P.B. to manufacturers of soap products, insecticides, disinfectants, and similar items that they switch to wood barrels in place of drums has brought about some package changes. In the case of liquid products containing water, or viscous liquids or pastes, wood barrels have been found to be usable in spite of their greatly added weight and higher cost compared to steel drums. (A white oak barrel costs about twice as much as a regular 55 gal. one-time shipper drum,—\$4.50-\$5.00 against \$2.50.)

In the case of certain thin liquids such as naphthas, kerosene, and even low-melting fats and oils, especially products which contain no water, their use has not been satisfactory and leakage has presented a serious problem. Various types of liners, both rigid and elastic, have been tried according to reports, but none thus far

has been reported satisfactory for these oil or petroleum base materials. Where the packaged material contains water, the effect of the water is to swell the staves and make and keep the barrel leak-proof, but petroleum, fats, greases, waxes, etc. seem to have the opposite effect, causing shrinkage of the barrels and causing leakage which in some instances becomes progressively worse. This is reported to be the case, for example, with pyrethrum extracts and other petroleum base insecticide materials and with finished fly sprays.

Experiments over a five-year period with wood barrels by several insecticide concentrate manufacturers indicate that these are not suitable for these concentrates and that leakage in shipment and storage is heavy. Barrels which were tested by rolling, dropping and other handling simulating shipment showed losses sufficient that this type of package was classified as economically impracticable for the purpose. If shippers of insecticide materials and other products with oil or naphtha bases are eventually compelled to switch completely to containers other than steel when their present stocks of drums and pails are used up and worn out, the switch will be to glass and not to wood barrels.

To those manufacturers who have found wood barrels suitable for some of their products and anticipate buying and using this type of container in the future, it is suggested that they make arrangements *now* for at least a small part of their needed supplies with reputable barrel and pail manufacturers so as to establish themselves on customer lists. Wood barrel and pail manufacturers are extremely busy, but may be able to accept orders now for later delivery. A month or two hence, these same barrel suppliers may refuse to accept further orders and this condition may apply throughout the cooperage industry. This appears to be good advice from a leading barrel manufacturer. And in passing, the same advice might also apply to glass bottles, carboys and other packages where a satisfactory source of supply has not already been set up by the manufacturer of soaps and chemical specialties.

**FIBRE AND PAPER PACKAGES**—In this category are included everything from fibre and paper drums and barrels down to cans and buckets of the same materials. In this group, there are a number of possibilities which may solve the container problems of the manufacturer of soaps, insecticides, disinfectants, etc. in the future. At the moment, most of the manufacturers of fibre drums are, like other container manufacturers, swamped with business. To obtain standard fibre drums for dry materials is difficult enough owing to the demand, but to secure the newer special type fibre drums which will carry greases, pastes, and some liquids is even more difficult. Recommendations by the W.P.B. in the case of fibre drums, as in wood barrels, have sent a wave of demand to these manufacturers from all types of industry. There are no W.P.B. restrictions on fibre or paper containers.

Fibre barrels for dry products have been used for many years. For wet or paste materials, they have been used for a shorter period, but with rapidly growing success. That low-cost fibre pails of the five and ten gallon type suitable for use as containers for fly spray, floor wax, disinfectant, etc., will be available in the not-too-distant future seems likely. Fibre grease drums have been in use by the petroleum industry for some time. But right at the moment, those manufacturers who desire to buy fibre drums or pails for the first time and who have no source of supply already set up, are going to find it difficult. The fibre container people are running just about at capacity to take care of the business already on hand.

A package made of a very thin steel shell which fits into an outer stiff fibre drum,—and which uses only about one-third of the steel of a regular one-time shipper,—has been looked over by the W.P.B. It appears to be a good idea, but has two faults,—it uses some steel, and nobody is yet set to make it. In fact, there are a dozen good package ideas on the docket at W.P.B., several of which if they were in production would be mighty useful

(Turn to Page 70)





GLOVES in use today for ordinary street wear may be of leather, or of fabric, or of both. Obviously, the so-called saddle soaps used for cleaning leather gear, boots and shoes are not suitable for cleaning the soft kids and other soft leathers and fabrics of which gloves are made. The process of glove cleaning is a highly specialized one and its successful completion necessitates the use of several kinds of dry cleaning and process soaps and finishing compounds. The best practice in Britain and America today is modeled on French methods and formulas and are those known in day to day use to give the best results in commercial glove cleaning.

Two standard glove soaps are recommended for ordinary processing, the first a dry cleaning soap and the second a wet process soap. These are composed essentially as follows: Dry cleaning soap—boil together 6.5 parts by weight of caustic potash, 12 parts of water, and 38 parts of olein, boiling in steam jacketed kettle or crutcher so that there is convenient means of agitation. When saponification is complete, allow the mass to cool to about 150 deg. F. and then add 10 parts of methyl alcohol and 50 parts of mineral spirit.\* Continue agitation

\* Mineral spirit is a petroleum naphtha, 300-400 deg. F. Designated in U.K. sometimes as "white spirit."

## SOAPS for GLOVE CLEANING

*By Paul J. Smith*

with declining temperature for at least half an hour and the soap is then ready for use.

Wet soap,—the so-called "wet" soap is made on similar lines, the proportions of ingredients, however, being somewhat different. The proportions are as follows: 5 parts by weight of caustic potash, 3 parts of water, and 31 parts of olein followed by 7 parts of methyl alcohol and 50 parts of mineral spirit. The designation, "wet" or "dry," merely indicates the particular process procedure and does not indicate that the formula contains more or less water, or that the actual clean-

ing process is carried out in aqueous solution. The proportion of soap to spirit is from 5 per cent to 10 per cent. This proportion applies to both types of soaps.

To appreciate the purpose and value of these two types of soaps, it is necessary to consider in some detail the modern method of cleaning gloves in commercial establishments. On arrival at the plant, all gloves are first checked into pairs and sorted into white and colors. In large plants, four varieties of whites are made, six to seven grades of light colors, two or three grades of dark colors, blacks and

part fabric and part leather gloves. All standard goods are put to one side for treatment before cleaning.

Perspiration marks on palms and bases of thumbs are treated on a slate slab with a damp sponge which removes most of the soluble sweat acids. Ink spots are usually removed by spotting the affected parts with a 10 per cent solution of potassium permanganate followed by a little acidified bisulfate. Rust stains are generally removed by one or more of the standard reagents for this purpose, 5 per cent warm oxalic acid solution, 10 per cent solution of tartaric acid, citric acid, or stannous (tin) chloride, —or what has been found quite effective, a 10 per cent solution of acetic acid which has been saturated with oxalic acid. All should be washed out thoroughly after spotting. Blood stains are removed by the use of weak ammonia solution. Lipstick and other cosmetic stains can be wiped away quite successfully with a damp clean sponge. In all cases, it is simpler to do the spotting before the actual dry cleaning. However, many stains are covered with soil and cannot be easily detected until after the dry cleaning operation in the machines has been carried out.

The actual cleaning operation is carried out in some type of standard glove cleaning machine provided with double brushes and linked up to centrifugals. The method of cleaning the different types of gloves, colors and fabrics will vary as will the procedure based on the degree of soil. The first grade of each color is usually cleaned in the machine in a special compound made up of one part of mixed oils to three parts of mineral spirit or other suitable solvent. The mixed oils recommended for leather gloves consist of a blend of vegetable and animal oils, 40 per cent coconut oil, 20 per cent castor oil, 20 per cent neatsfoot oil, and 20 per cent olive oil, a formula devised before the present shortage of coconut and olive oils. But various other formulas are available, substituting light mineral oil for the neatsfoot for example, or other vegetable oils for the olive or coconut. However, the formula given here is one which in

practical plant experience has proved to give the best results and to produce a finished glove of softness and attractive appearance. After the gloves have been worked for forty minutes in the cleaning machine, they are removed and hydro-extracted, dried and tumbled to soften them. They are then sent to be tinted.

Really dirty gloves of all colors are cleaned in soap and solvent. The proportions recommended are 1.5 gallons of the dry cleaning soap in forty gallons of mineral spirit. The fingers of the medium and badly soiled gloves are soaked in the "wet" soap and then cleaned in the solution above, the dirtiest being given an hour treatment and the medium dirty a half hour. These operations are timed so that all batches are removed from the cleaning machines at the same time. After this cleaning, all badly soiled gloves which have been soap treated are rinsed in clean mineral spirit for twenty minutes, hydro-extracted and dried. They are then rinsed in what is known as a "nourishing" or "feeding" solution, made of 12½ ounces of castor oil and 3½ ounces of neatsfoot oil dissolved in five gallons of mineral spirit. In the summer, an addition of 12½ ounces of beeswax is added to the above and brings about a very considerable improvement in both "handle" and appearance.

Most of the finest quality or the cleanest white gloves are cleaned in a solution of 2 gallons of the standard dry cleaning soap in forty gallons of mineral spirit in the usual glove cleaning machine for a half hour. Second grade white gloves are treated for 40 to 50 minutes and badly soiled for an hour or an hour-and-a-half. The worst type or very dirty is soaked in wet soap for half an hour before the actual dry cleaning is carried out. All the whites are then rinsed with clean mineral spirit for half an hour and extracted, dry tumbled and dried. They are then given a rinse in a mixture of 2½ pints of cyclohexanol soap and 2 ounces of French chalk in 30 gallons of spirit for a half hour, extracted again, tumbled, dried and finished on electrically heated glove trees.

An interesting finishing preparation for black kid gloves is made with a special soap compound as follows: 3 ounces of white soap, one ounce of Japan wax boiled in 8 ounces of water to which is added 200 cc. of sulfonated neatsfoot oil. The compound is then diluted with enough distilled water to make two pints.

A compound which has found some success for spray cleaning gloves, and which is known as a "reviver" can be made up as follows: 1,000 cc. sulfonated castor oil, 1000 cc. water, 250 grams tartaric acid. This stock solution is usually diluted ten or fifteen times with water before use. Some glove cleaners prefer to use a sulfonated fatty alcohol solution together with a little soluble mineral oil for reviving the color of cleaned gloves. Other cleaners press all slick finish leathers by hand on hothead presses and then immediately rub the grain surface down with a soft rag saturated with saddle soap which is put on extra heavy and feathered out to the edges in those areas that have a whitish, washed-out appearance. Where pigment finishing has to be employed in glove cleaning, and this is avoided wherever possible owing to the high cost of the operation, use is generally made of finely ground pigments, casein bound and in the presence of dilute sulfonated castor oil or potassium castor oil soap.

Substantially neutral mixed glyceride ester of fatty acids are manufactured containing principally lauric and myristic acids. These esters have a higher softening point and a higher saponification number than the oil from which they are derived. Ernest F. Drew. Canadian Patent No. 407,047.

The oxidase preparation obtained as an aqueous extract from defatted soybeans had little or no effect on the uptake of oxygen by dilute emulsions of oleic and ricinoleic acids at pH 6.5. It catalyzed the uptake of one molecule of oxygen by linoleic acid and two molecules by linolenic acid. The oxidase was inactivated by heating 20 minutes at 72-4°C. H. Sullmann. *Helv. Chem. Acta* 24, 1360-80; through *Chem. Abs.*

# MEXICAN SOAP MARKET

*By Dr. Alice R. Gerstel*

IF the state of civilization within a country may be measured by the soap consumed, then Mexico has shown a marked advancement over the past ten years. If the available figures may be trusted, the consumption rate of soap by the people of Mexico as a whole has practically doubled since 1932, for then it was given at five pounds per capita, and today the statistics indicate that it is ten pounds per capita. But soap as a guide to the civilized state might not give an accurate picture as far as Mexico is concerned. In the capital, and the not-too-numerous larger cities, Mexico City, Monterrey, Guadalajara, the general standard of sanitation and cleanliness is high and quite typical of other large cities in the Western World. Many types of soaps, cleaners, beauty products, both Mexican and foreign,

are sold in the department, drug, grocery and specialty stores. But when the country as a whole is considered, the picture is different. A very high percentage of the twenty million population of Mexico still lives in small villages dispersed about the country with generally poor roads and little other means of communication. In these latter, the consumption of soap is small and sanitary conditions are far below the levels of even the smaller cities. If the inhabitants use any soap at all, it is exclusively the cheapest kind of laundry soap and it is used



Community wash tubs of concrete by the side of a stream in the small Mexican town of Tlapan, built by the town officials and typical of similar installations throughout Mexico

sparingly for the simple reason that the people do not have the money to buy more or better soap.

The universal soap of Mexico is "yellow" or brown laundry soap. Not only is it used for laundering, washing dishes and general cleaning, but it is also toilet soap as well. Big, medium and small soap plants produce laundry soap as well as many tiny local workshops. All told, the soap plants of Mexico produce about 100,000 tons of all kinds of soap yearly, mostly laundry. Shape, quality and prices differ widely. There is no such thing as a standard size or shape of laundry soap in the country, and all attempts at standardization have failed thus far. The demands of local dealers and of consumers vary, one wanting sixty bars to a box, another seventy and still others a hundred. One dealer

*Ewing Galloway photo.*



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wants the bars long and thin so that they may be cut and sold in fractions, while others want them almost cubic. And because of these varying demands of the market, the soap makers have been unable to agree among themselves upon anything resembling a standard. Furthermore, attempts to form an association of soap manufacturers in Mexico through which some of these problems might be solved have likewise met with no success.

Among the soap manufacturers of Mexico, first place is occupied by the firm La Luz in Mexico City with about 200 employes, and a consumption of about 250 tons of fats and oils per month. In the north of Mexico, it is La Union in Torreón (Coahuila) and La Esperanza in Gómez Palacio (Durango), the latter with a yearly production of 15,000 tons but temporarily not operating because of administration troubles. In the second line, there are many medium and small manufacturers. According to official statistics, in 1940 (last available figures) 96 soap firms, each with a production of more than 10,000 pesos per year (roughly \$2,000) were operating in Mexico, employing about 1300 workers.

Total production of soap and allied products, according to the same statistics, had a value of 38,000,000 pesos. Of these, about 28,500,000 pesos, or 73 per cent, represent laundry soap. The rest, 27 per cent, is reported between toilet soaps, industrial soaps, glycerine and various other cleansers. The weight of laundry soap within the market is thus being confirmed by statistics. Yet these figures need some additional explanation in two respects: First, many items belonging on the total list of detergents are imported and consequently not considered in the statistics of national production. These should be added to the

figure for "various" and would increase the percentage of products which are not laundry soap, as practically no laundry soap is imported.

On the other hand, official statistics are based on the reports of only those producers with a yearly production of more than 10,000 pesos, while estimates based on a recent census (which is not yet fully elaborated) say that 35-40 per cent of the country's entire soap production is covered by small and tiny workshops and domestic manufacturing throughout the country. Almost all of these make exclusively cheap laundry soap, and consequently the percentage of this line is increased much beyond the statistical figures. (Brown laundry soap is probably well over 90 per cent of total output.—ED.)

A common feature of all this Mexican laundry soap is that it is "yellow," namely based on rosin, and using sodium silicate as a soap builder. Soap builders of the phosphate type are not used because of high cost. From 1934 to 1940, prices had climbed slowly and steadily, from an average of 15 centavos (about 3 cents) to 23 centavos (about 4 and a half cents) per pound. Since then, soap costs have risen to 40-50 centavos (8-10 cents) a pound and prices are still rising because of increasing shortage of basic material, such as fats, oils, rosin, and caustic soda. The manufacturers have supply troubles on their hands and can not even think of filling the demand which comes in numerously from other Latin-American countries.

**T**OILET soap in Mexico fills a small place compared with laundry soap. Only about 3,500 tons are manufactured, by far the biggest supplier of toilet soap being the Mexican branch of the Colgate-Palmolive-Peet Company. In most of the middleclass and quite

a few of the upper class households, the green palmolive cakes, sold in three different sizes, may be found in the bathroom. The palmolive soap is sold not only in drugstores, department stores, groceries and perfumery shops, but along with the laundry soap in the typical candle shops,—(Mexico is a poorly electrified country as yet)—, and even in numerous street corner booths, on cigar- and on lottery-ticket stands.

Other producers of toilet soap are the Spanish owned Myrurgia and Jardines de California, the perfumery Castillo, a sideline of La Luz, these and several other ones producing about 10-20 tons per month. Most rich Mexicans use foreign toilet soap brands such as Yardley, Ivory, Woodbury, Pears, Lux, and,—till last year,—the French brands of Roger Gallet, Houbigant, etc.

Glycerine is produced on a very limited scale, the whole output now being about 500 tons per year, having been 830 tons in 1934 and 620 in 1937. Four plants are the suppliers, the largest being again La Luz with American installations of Garrigue and Drucker & Siek, Chicago. Then the Minacata and the Vergara both in Guadalajara, and La Economica of Mexico City, the latter specializing in crude glycerine only.

Chemical laundry bleaches are used very little, as the bleaching is done mostly by the sun which shines all year. As this sun is so strong, it destroys the finer fabrics in a short time. Old-fashioned washing habits (rubbing the cloths on a stone, with cold water) add to this destruction. A few small firms manufacture eau de javal (sodium hypochlorite) with 14 grams free chlorine per liter.

Liquid soap is made in modest scale in the already mentioned soap factories. Household cleansers are

Soap consumption in Mexico was about five pounds per capita ten years ago. Today, it is estimated at 10 pounds per capita, the increase being ascribed to government propaganda and education.



equally little used, as a hardfiber scrubber, "zacate" is doing the job with or without lanudry soap. There are several brands of cleansing powder, such as Bon Ami, Limpiatodo, Sir, etc., used only in the better households. Crystallized soda for household purposes was an exclusive of the German firm Beick & Felix which along with other German firms has been put under government control beginning of June this year.

Shaving soap and shampoo are produced by many firms among which Colgate (Mexican branch), Vilma and Corona are the most popular. Tooth soap is covered mostly by foreign firms like Squibbs, Kolinis, Listerine, Ipana, etc., which all do the manufacturing within this country.

Textile soaps are distributed by the du Pont branch and the Swedish owned Madrefyus which used to distribute Swiss products of Ciba and Geigi. No dyes or textile chemicals are as yet being produced in this country and with a few exceptions are unavailable now. As an engineer of the du Pont branch puts it, "if things are going on as they are now, we will shortly all dress in pink" (cochineal being the only native dyestuff).

THE principal materials used in the production of soap and cleaners are much the same as anywhere else. A few figures as to their importance might be interesting for the American reader. In 1940 (last statistical report) 96 soap manufacturers with a production over 10,000 pesos each per year, used the following:

Vegetable oils: Mexican, 21,000 tons, worth about \$3,000,000; Foreign, 3,500 tons, worth about \$500,000.

Animal fats: Mexican only, about 2,800 tons, worth about \$400,000.

Caustic soda: Mexican, 500 tons, worth \$42,000; Foreign, 6,000 tons, worth \$500,000.

Rosin: Mexican only, 6,500 tons, worth \$250,000.

Silicate: Mexican only, 4,500 tons, worth \$130,000.

Now, these figures need some rectification, as obviously many firms reported on their material as being

Mexican, while in fact it was foreign which they purchased through jobbers. This holds true mostly for the oils. Coconut oil, coming from abroad, was practically the largest item among them, used along with a variety of Mexican oils such as cotton, sesame, peanut, rape seed, coquito, locally also chicalote, called the Mexican poppy. All these latter together are not yet sufficient to substitute for the shortage of copra. The government recently has been giving great attention to the cultivating of native oil-plants and encouraging the planters. But while large areas are already planted and are constantly being planted on an increasing scale with copra palms, the result is poor as long as highways, railways and transportation means are not sufficient to bring the raw material to the processing centers.

Next to coconut, caustic soda is the thing most lacking actually. What is available, is subject to speculation, and prices have risen fantastically in the few recent months. Yet there exists a good possibility of manufacturing caustic soda and soda ash in this country. At a distance of 15 miles from Mexico City, at Texcoco Lake, the authorities have developed an ingenious process to concentrate the brines derived from the alkaline barren lands. Here is an opportunity for men with capital and initiative. Agricultural insecticides are made by the firm Productos Químicos Mexicanos Lavin, Mexico City. This firm has an electrolytic caustic soda plant, using the excess chlorine to manufacture calcium arsenate from milk of lime and arsenic trioxide.

In a country with mostly tropical or subtropical climate, household insecticides of course play a role. Flit is imported and distributed by Sanborn Brothers. For a few years, Rip, made by the National Oil Company Petrols Mexicanos, using imported pyrethrum, has been on the market. Professor Madinabeitia, a Spanish refugee and scientist, is carrying out researches on the insecticide-holding plant called cebadilla (a liliacea), which grows wild abundantly in this country and if cultivated might be a substitute for pyrethrum from abroad. A popular house-

hold insecticide were the "cocksticks" incense from Japan, but they have disappeared from the market totally, and a few weeks ago, the Mexican laboratory Azteca came into the market with a substitute product of the kind.

The future of the Mexican soap market depends on several things, a certain soap content and standardization will be demanded in the long run. Government regulations aiming at better sanitation over the country, may promote new branches of industry or enlarge existing ones. A decree was issued—to take an instance at random, —recently, ordering all the restaurants, coffee houses, theatres, etc., to install deodorizers in the toilets. Health campaigns of the Public Health Departments constantly urge a wider and more rational use of soaps and cleansing products. Government, on the other hand, is sponsoring the development of the rich sources of natural supply within the country. The plantation and cultivation of oil plants is promoted vigorously with the aim to make the country self-sufficient in this field. Recently rumors have been heard about the American Government promoting the development of several new oil plants in Mexico. Among the eight basic industries which according to a recent message of President Avila Camacho, are going to profit by a large government investment fund, was mentioned the soap industry.

While all the complicated problems connected with this market are now worrying the manufacturers as well as the government, it is likely that in the long run the problems can be solved. In the meantime, Mexico pins her hopes on the United States for the release of lacking raw materials and machinery.

A new, high-flash petroleum solvent known as Apco 160 has been developed by Anderson-Prichard Oil Corporation, Tulsa, Oklahoma. The solvent has a flash point of 160° F. Tests show that it can be used satisfactorily in a Zoric machine equipped with a filter, and probably can be used in most units designed for chlorinated hydrocarbon solvents which are equipped with a filter, provided a separate extractor and tumbler are used.



# FLOOR M

**C**ONSERVATION of floors and floor maintenance materials,—a rather timely subject, we all admit, but still one that we have great trouble in taking seriously. As a matter of fact, when I see how impossible it has been to bring the American public around to a point of true conservation on such every-day items as tires, gasoline, fuel oil and metals, I hardly have the nerve to proceed with this article. However, we are faced with the definite fact that floors and floor maintenance materials,

For preserving appearance, and protection against undue wear, linoleum floors should be cleaned with nothing stronger than a mild potash soap followed by waxing. Alkaline cleaners and abrasives should never be used.

—or rather the raw materials that go to make them,—cannot be replaced and I am at least going to have the satisfaction at some later date of saying "I told you so." With this as encouragement, let me point out just a few of the most glaring difficulties our indus-

try faces, and then a suggestion or so as to what we might do to help the situation.

Let us not dwell too long on such domestic problems as the rapidly increasing difficulty in securing skilled civilian labor. Let us pass for the time such grief as the congested transportation facilities. Let us even go as far as to say that if you cannot get tin cans or steel drums, our American ingenuity will prompt the finding of some method by which our material can be packed in glass, fibre, paper, or some other substitute and center our attention only on those raw materials which we all know must be imported and on the most critical of our domestic raw materials.

Cork from Spain for linoleum.

Latex from the East for rubber.

Gums and fibre for asphalt tile.

Chlorides for magnesite composition.

Carnauba wax from Brazil.

Alcohol for adhesives (linoleum paste).

Color pigments for both floors and material.

Linseed oil (again for linoleum).

China wood oil for seals.

Phenolic resins, ammonia, borax, etc.

We in the floor or the floor material business have our troubles and unfortunately like any other cross-section of the American business world, we have, to a great extent, sat idly by and placidly allowed these problems to

# OR MAINTENANCE...

## Conservation of floors and floor maintenance materials

*By Richards Jarden*

President, Franklin Research Co.

build up within themselves to a point verging on the insurmountable. It seems a part of the American character that we should be hard to wake up. We talk economy and then live in a whirlpool of spendthrift activities,—waste here,—carelessness there, and still we have the colossal nerve to sit back and look upon ourselves as efficient business men until something like the present emergency wakes us up with a start.

Let's assume that we are awake to these difficulties *now* and see if we can formulate a plan to ease the ten-

sion. Floors and floor maintenance materials are not replaceable. Their normal life must be extended and I have some definite suggestions along the lines of conservation.

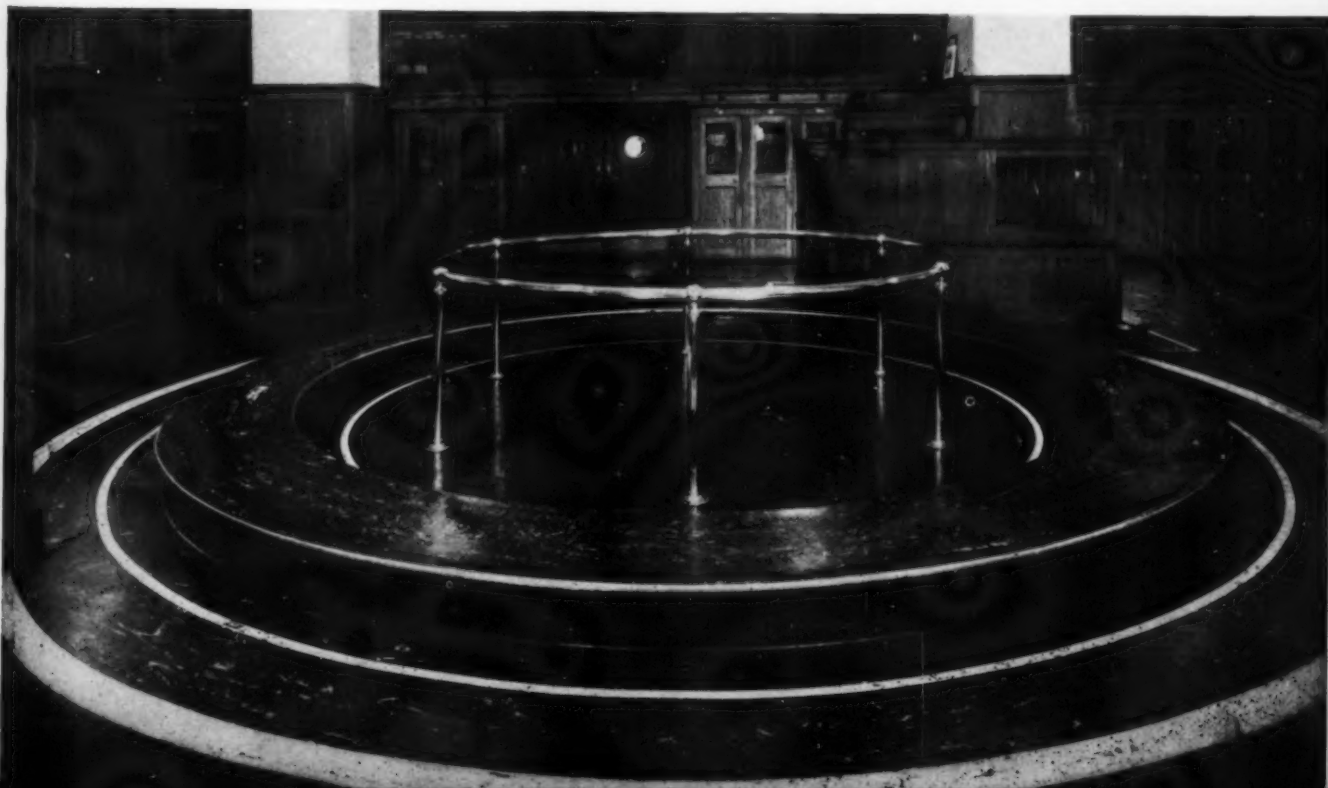
**Save The Surface:** The Paint Association has a slogan — "Save the surface and you save all." If this

★ ★ ★

Fine floor appearance unmarred by heavy daily traffic,—rubber floor of the trading ring of the New York Cocoa Exchange retains its original newness and freshness by weekly treatment with heavy-duty floor wax.

applies to a wall, a ceiling or a roof where most of the abuse is from mere oxidation or weathering, how much more definitely does it apply to a floor surface, where we have abusive traffic and the need of constant cleaning? It is truly said that "more floors are washed away than are worn away." Wash water itself flushes out a goodly percentage of the life-giving properties of any floor. The addition of any soap or cleaning element furthers the destructive action of the water, for all soaps or cleaners are made either to

(Turn to Page 67)





## New Products

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Bee Brand Insect Spray, manufactured by McCormick & Co., Baltimore, is currently appearing in amber Duraglas bottles. It was formerly put up in cans. New containers come in three sizes of 6, 16 and 32 ounces.

Mitts, a water soluble skin cream that is applied to the hands or other exposed parts before starting work, is something new with Mitts Mfg. Co., Bklyn.



The combination of interesting soap sculptures in unusual packagings has given Tre-Jur's line of novelty soap real sales impetus. For example, the three ducks shown here are packaged to retail around 69c and make a real hit with the kiddies. So do the other sixteen or so numbers in the line.



## and Packages



Yardley & Co., New York, have designed this new shaving gift set for men to retail for \$3.50. Consists of shaving soap in bowl, after shave lotion and powder.

Dorothy Gray, New York, is introducing this five-piece South American soap set. Besides a senorita, there are two sombreros and two molded rosebuds. All scented with South American odors, the set retails for \$1.25.



Another well-known product to convert from metal containers to glass is No-Rub floor wax, made by Wilbert Products Co., New York. No-Rub's new bottles are made by Owens-Illinois.

# **TURNER**

**CAUSTIC SODA**

**PERSULPHATE OF POTASH**

**PERSULPHATE OF AMMONIA**



## **JOSEPH TURNER & COMPANY**

**RIDGEFIELD, NEW JERSEY**

**83 Exchange Place, Providence**

**40th St. and Calumet Ave., Chicago**

# NEWS

## Watkins Aids Scrap Drive

The abundant part J. R. Watkins Co., Winona, Minnesota, is playing in the current drive to salvage scrap was described recently in a story in *The Scrapper*, official organ of the National Waste Salvage Committee. Since the Watkins representatives call on a combined total of five million farms and city homes monthly they have been able to achieve some really striking results in stimulating salvage recovery. One New York salesman has the names of 340 customers who have responded to the plea for scrap. During a six-day period, 34,650 pounds of metal and scrap rubber were turned in. Another salesman was responsible for having his customers in Nebraska turn in 183 tons of scrap metal and 24,744 pounds of rubber—all within a period of less than three weeks.

## Reid Over Two P&G Plants

Forestus Reid, superintendent of the Long Beach (Cal.) Procter & Gamble plant for the past six years, has taken over the job of running two plants of the company in Cincinnati. He has been with Procter & Gamble for the past 17 years, going to Long Beach from Cincinnati. He would have been superintendent there six years on November 11. Mr. Reid will be replaced at Long Beach by Paul Nichols of Chicago, who for the past ten years has been located in that city in an executive capacity.

## Form Cosmetic Trans. Comm.

The formation of a toiletries and cosmetics industry transportation advisory committee was announced recently by the WPB. Committee members are: Michael Harris, Max Factor, Inc., Hollywood, Cal.; Stuart E. Kaiser, Andrew Jergens Co., Cinn.;

Howard S. Lyon, Comfort Mfg. Co., Chicago; Abe Plough, Plough, Inc., Memphis, Tenn.; S. V. Rettino, Bristol Meyers Co., Hillside, N. J.; Horace Rosner, Coty, Inc., New York; Carl von Rohr, Burma-Vita Co., Minneapolis; and O. D. Wheaton, Wildroot Co., Buffalo.

## Nippert Reports on Credit

G. H. Nippert of Procter & Gamble Distributing Co., Chicago, and president of the Chicago Association of Credit Men, received considerable newspaper attention recently when he released a statement reviewing credit conditions throughout the midwest in all industrial and commercial fields. Collections have reached the highest point in many months, Mr. Nippert stated. Not a single report from his association's industry credit groups of manufacturers, wholesalers and jobbers showed collections to be poor, he said. Reports of "good" collections came from 81.7 per cent of the firms reporting and only 18.3 per cent reported "fair."

## 1c Sale for "Sweetheart"

Manhattan Soap Co., New York, used full-page ads in Chicago newspapers last month (Sept.) to promote a "1-cent sale" for "Sweetheart" toilet soap. Purchasers of three cakes at the regular price received a fourth for a penny.

## Canadian Soap Tax Revenue Up

Unofficial estimates just released from Canada show that the 25 per cent tax (in effect) on toilet soaps and cosmetics since April, 1941, will bring in about \$3,500,000 by the end of the present fiscal year. The original tax, enacted in 1933, was 5 per cent on toilet soaps and 10 per cent on toilet preparations.

## 25 Per Cent More Lauric Frozen

An additional 25 per cent of inventory stocks of coconut, babassu and palm kernel oils of all persons having 240,000 pounds or more on hand was ordered frozen September 16 by the War Production Board. Ordered frozen, too, were 25 per cent of all future imports of these oils, or of materials containing them. This action, which was taken in Supplementary Order M-60-a, is designed to add to the nation's stockpile of high lauric acid oils, according to the WPB.

The first 25 per cent freezing was ordered on March 20, 1942, in Order M-60 and applied to inventories exceeding 30,000 pounds. The newest freezing order, however, applies only to large inventory stocks and does not include any but the three principal sources of high lauric acid oils. The various end use restrictions of M-60 continue in effect and M-60-a provides only for additional freezing.

## Nielco Metal Cleaners

Nielco Laboratories, Detroit, have developed a new type brass and copper cleaner for use in still as well as agitated tanks. Two formulas were developed to meet these requirements. Technical sheets describing the various properties and tests are available from Nielco.

## Albert Cramer Dies

Albert Cramer, founder and owner of National Soap Co., Detroit, died September 16. He was 78 years old.

## BIMS in Golf Final

The final golf tournament and dinner party of the BIMS of Boston took place September 24, at the Woodland Country Club, Newton, Mass.



### Soaps At Cosmetic Show

Toilet soaps and shampoos for the beauty shop trade were displayed by five manufacturers at the convention of the American Cosmeticians National Association in Chicago, Sept. 14 to 16.

Antiseptol Co., Inc., Chicago, promoted their "Marveloks" shampoo in base form, along with "Mellofoam" liquid shampoo concentrate and "Mellofoam" shampoo base. Rodney Coulson of Coulson & Son, a subsidiary of the Antiseptol Co., was in charge.

Ben-Cole Laboratories, Chicago, exhibited their newly-formulated "Grotex" medicated lathering oil, with Bernard Benjamin, company president, and Paul Ginsburg, sales manager, directing the demonstrations.

L-B Laboratories, Hollywood, Calif., introduced their "L-B" foaming shampoo and other beauty preparations. G. Olson, eastern district manager, said the shampoo has only recently been offered for distribution east of the Rockies.

Boyer International Laboratories, Chicago, had in their booth a

display of their line of pastel, complexion and germicidal soaps, along with shampoos and liquid soaps. A special offer was being made of a gift box containing a complete set of cosmetics. Louis Clement, sales manager, directed a large staff of assistants.

Lightfoot, Schultz & Co.'s newest line of novelty soap designs for the Christmas trade was exhibited by Bailey's Beautician Supply Co., Chicago agents for the New York firm. A representative said that arrangements had been made to donate all commissions on sales to the widow of the late Barney Atlas, whose sudden death occurred recently. Mr. Atlas had participated in the Cosmeticians' convention for years.

War conditions were reflected in the trade show at the National Hairdressers Association convention in Chicago, Sept. 21 to 23. Only one soap maker, the Boyer International Laboratories of Chicago, exhibited. Substantially the same display of products was made as this company showed at the Cosmeticians' convention a week prior.

chandising methods said Mr. Mayham and presage the elimination of the system of merchandise "returns."

Other speakers at the meeting included F. J. Griffiths, director of the National Association of Chain Drug Stores; and Ralph W. Clark of Merck & Co.

### Packaging Convention Nov. 5-6

The Packaging Institute, Inc., will hold its annual convention November 5 and 6, at the Hotel New Yorker, N. Y. Packaging in war time will be the subject of the program discussions.

### Wrisley Red Cross Course

Allen B. Wrisley Co., Chicago, has made available to its employees an opportunity to learn Red Cross first aid work on company time. About 75 employees are taking the courses which are held during the afternoon four days each week. Wm. Paulick, world war veteran and public school instructor in physical education, was secured as instructor.

### Holbrook Mfg. Not Dissolved

James S. McIntosh, president and owner of the Holbrook Manufacturing Co., now located at Passaic, N. J. states that the company is continuing operations under the Holbrook name. The statement in the last issue of *Soap & Sanitary Chemicals* that the Holbrook Company had been dissolved was incorrect. The company was formerly located in Jersey City and the sale of the building which the company had occupied there, gave rise to the error. The new mail address of Holbrook is 17 DeBell Court, Passaic, N. J. The regular line of soaps and specialties will continue to be manufactured and sold. The company which is now in its 96th year, was founded by Francis P. Holbrook in Brooklyn, N. Y. in 1847, moving subsequently to New York City and in 1910 to Jersey City.

### Ward Buchanan Dies

Ward Buchanan, former manager of the central sales division of Procter & Gamble Co., Cincinnati, died recently in Lewisburg, W. Va., after a short illness. He was 50 years old.

In World War I, he was a First Lieutenant with the Field Artillery overseas. After the war the French government kept him in France as an instructor in heavy artillery.

In 1921 he was made manager of the Detroit office of Procter & Gamble Co., and became sales manager six years later. On leave of absence, he then resided in England, and later was sales manager of Thomas Headley Co., a P. & G. subsidiary. He retired in 1940.

Mr. Buchanan was born in Wyoming, Ohio, and was a graduate of the University of Virginia. His only survivor is his widow.

### Colgate Made Tyson V.P.

John K. Colgate, director of C-P-P, was recently appointed vice-president and treasurer of Tyson Bearing Corp. He is the son of the late Russell Colgate and also a director of Van Strum & Towne, Inc., investment counsel.

### OPA-WPB Curbs Conflict

Increasing operational difficulties in the cosmetic industry are the result of conflicting OPA price regulations and recently issued WPB Limitation Order No. 171, said S. L. Mayham, executive secretary of the Toilet Goods Association at the annual meeting of the Associated Chain Drug Stores at the Waldorf-Astoria Hotel, last month. On the one hand the WPB limitation order seeks product changes to conserve critical materials and on the other hand the OPA looks with disfavor on any product changes since it regards them as new products that must be priced according to OPA procedure. There are conferences under way now that Mr. Mayham hopes will alleviate this trying condition. On the basis of shortages of materials going into the manufacture of cosmetics, and numerous "turn downs" on the part of the OPA for the introduction of new cosmetic products, he foresaw a tightening in the cosmetic supply situation in the near future. These shortages will preclude the possibility of adhering to previous promotional and mer-



# Limit Fat & Oil Use

SOAP makers in the four-month period September 1 to December 31, 1942 can use only 90 per cent of half of the amount of fats and oils they used for the manufacture of their products in the two four-months periods of September 1 to December 31, 1940 and 1941. This restriction, imposed by the WPB, covers all fats and oils with the one exception of soap made from vegetable oil "foots," of which 119 per cent of the quantity used in the two base periods can be used in the specified period.

The purpose of this limitation—a revision of M-71—on the uses of fats and oils is to allow the building up of a reserve supply of these vital war materials, the WPB states. In setting up new controls over fats and oils, edible as well as inedible fats and oils are affected. The quotas which the order specifies are given in connection with the list of products to which they apply.

Beginning on the first of the year, quotas will cover quarterly periods and percentages will be figured on corresponding quarterly periods in the years 1940 and 1941. Until the first of the year, however, a slightly different basis for the arrangement was established since the order was issued September 22, retroactive to September 1, 1942.

The quotas fixed by this order are applied not to particular fats and oils, but to over-all kinds. Each existing limitation on any specific oil, such as coconut or palm, still is in effect.

Exemptions to the order are granted: 1.) manufacturers who use less than 6000 pounds of fats and oils in any period or quarter. 2.) Manufacturers of soap for Lend-Lease. Therefore, fats and oils used in the manufacture of soap for Lend-Lease should be excluded from computation of consumption. No exemption is granted to Army, Navy, etc., suppliers of soap and soap products.

In the case of the manufacturer who does not consume his quota, he

may use the unused portion in succeeding quarters up to June 30, 1943 or beyond June 30 of each succeeding year.

Another provision of the recently issued order provides that wholesaler sellers of linseed oil are restricted to 80 per cent of the amount delivered in the corresponding period of one and two years ago.

The effect of the order is considerably lessened due to the fact that soap production reached an all-time high last year with a consequently high rate of fat and oil consumption.

## Allocate Castor Oils

Castor Oil was placed under complete allocation control by the WPB in Order M-235, issued September 25. Allocation is scheduled to go into effect on October 1. Regular monthly allocation, to be sought on Form PD-600, will begin November 1. Application for use, consumption or processing in October may be made at any time, but thereafter applications must be received by the 15th of the month preceding the one in which

delivery is sought. Exceptions are made for users of 35 pounds or less in any month, for pressing, bleaching, or alkali refining any quantity, or for medicinal purposes. This move, while expected for some time, did cause a buying flurry in some sections of the market. This was not the case with dehydrated castor, however, other quarters reported.

## Name WPB Drugs Staff

Personnel of the new Drugs and Cosmetics Section of the Chemicals Branch of the WPB includes: F. J. Stock, chief; C. A. Willard, deputy chief; consultants: Floyd Thayer, Dr. A. B. Pacini, John Williams and Dr. Dan Dahle; Biologicals and Medical Chemicals Unit: J. T. Betson, chief; Botanicals and Imports Unit: T. F. Currens; Vitamins and Agar Unit: Mark Merrell; Cosmetics Unit: Robert Blair. This new section replaces the Toiletries and Cosmetics Branch of the WPB.

## Lane Addresses Foremen

Thomas Lane, personnel director of Lever Bros. Co., was listed among the speakers scheduled to address the convention of the National Association of Foremen in Chicago last month.

# Oil-Fat Output Up 20% In 1942-43 Estimates

AMERICAN production of oils and fats from wholly domestic materials will show an increase of 20 per cent for the 1942-43 period over the 1941-42 figures according to the U. S. Department of Agriculture. The 1942-43 production will probably total about 12,000,000,000 pounds, said the estimates of the Department, published Sept. 28, some 2,000,000,000 pounds above the figures for 1941-42. This increase, it is pointed out, will be sufficient to offset increased exports from the United States under Lend-Lease, and will also cover the decrease that has

occurred in imports as a result of war conditions.

The potential output of oil from the 1942 harvest of cotton seed, soybean, peanut and flaxseed crops will approximate 4,400,000,000 pounds, compared with about 2,600,000,000 pounds from the 1941 harvest if the Sept. 1 forecasts are realized. But with a production of soybeans in the North Central States greatly in excess of the annual crushing capacity of mills in the region, actual production of oil from the four crops may not exceed 4,000,000,000 pounds.



## Improve Your Product & Profit

**Metso Granular** ( $\text{Na}_2\text{SiO}_3 \cdot 5\text{H}_2\text{O}$ ), original sodium metasilicate, white, granular, free-flowing product.

**Metso Fines**, sodium metasilicate. Same as Granular in composition. Finely powdered for special compounds.

**Metso Anhydrous** ( $\text{Na}_2\text{SiO}_3$ ), sodium metasilicate, without water of crystallization.

**Metso 99** ( $\text{Na}_3\text{HSiO}_4 \cdot 5\text{H}_2\text{O}$ ), sodium sesquisilicate. White Granular and free-flowing.

**GC** ( $\text{Na}_2\text{O} \cdot 2\text{SiO}_2$ ), powdered sodium silicate. Hydrated, alkaline, rapidly soluble.

**G** ( $\text{Na}_2\text{O} \cdot 3.22\text{SiO}_2$ ), hydrated powdered sodium silicate, rapidly soluble.

The popularity of PQ Silicated cleansers and compounds grows and grows. The principal difference between PQ Silicates and other alkalis is properly balanced soluble silica content which contributes these five big advantages to your private brands:

1. Restrains corrosive action
2. Effectively buffers to sustain cleaning power
3. Rinses freely
4. Prevents dirt from redepositing on clean surfaces
5. Priced economically as basic chemical

PQ Soluble Silicates are easy to work with, mix well with soaps, other alkalis, sequestering and wetting agents. Send now for descriptive bulletins, for samples, for prices. All grades are available for prompt deliveries.



# PHILADELPHIA QUARTZ CO.

SILICATES OF SODA

125 S. THIRD STREET, PHILA., PA.

# Soapers, Textile Experts Oppose Fastness Rules

THE unanimity of opposition expressed by all trade groups to proposed colorfastness rulings of the Federal Trade Commission was unbroken by representatives of soap makers and the soap association. Opposition by soap makers to the proposed rulings at the final hearing in the Hotel Pennsylvania, New York, on September 9, as expressed by N. N. Dalton of the Soap and Glycerine Producers Association, was based on the fact that soap composition might have to be changed as a result of these rulings. And, aside from other considerations, since changes constitute new products in the eyes of the O.P.A. and new products are frowned upon by O.P.A., the situation is complicated further. Mr. Dalton went on to point out that these F.T.C. proposals should have further study by the W.P.B. and by the National Bureau of Standards, which body has apparently been disregarded in the consideration of this matter. The association, according to him, would be glad to help in the development of washing instructions.

G. T. Halberstadt, technical adviser of Procter & Gamble, submitted an exhibit which he had promised to make.

According to a story in the *New York Times*, the O.P.A. is reported as favoring trade practice rules covering the colorfastness of textiles, but regards the F.T.C.'s effort along these lines as unworkable. Not only that, it went on to report, Dr. Jules Labarthe, of the American Standards Association, which has a committee acting as a liaison group for the O.P.A., says these new proposals will discourage informative labeling and will "defeat the end which the rules are intended to serve and will boomerang to the disadvantage of the consumer, distributor, manufacturer and processor alike."

In a similar vein, John Marshall of the American Institute of

Laundrying, declared that passage of the new rules was predicated on the almost complete abandonment of "washable" labeling and full reliance on trademarks only. He was also of the opinion that laundries would be faced with a difficult sales problem if customers were to take the rulings at their face value since so little merchandise would be "launderable."

The list of persons and groups opposing the proposed rulings is interesting and impressive. It includes: William J. Matthews, counsel for the National Association of Finishers of Textile Fabrics; W. Ralph McIntyre, president of that association and vice-president of Joseph Bancroft & Sons Co.; Miss Alice Moore, secretary of the Finishers Association; Percy S. Howe, Jr., president, American Thread Co.; Fred W. Morrison, counsel for the rayon yarn producer's group; Ed. Schlesinger of Cohn-Hall-Marx; Philip A. Johnson, Hampton Co.; Harvey Wilson, National Federation of Textiles; Paul B. Halsted, secretary of the Cotton-Textile Institute; Mr. Crane, representing National Cotton Council; H. J. Dow, Institute of Carpet Manufacturers of America; H. M. Chase, director of research for the Riverside and Dan River Cotton Mills.

All of the consumer groups having representatives appearing in person or by letter favored the proposed F.T.C. rulings. They included: Mrs. Claire Meyers, of the Consumer Advisory Committee of Los Angeles (letter); Miss Dorothy Strauss, vice-president, Boston City Federation of Women's Clubs and associated with the Boston League for Women Workers; Miss Catherine Armitage, chairman of the League of Women Shoppers; Emily Walton, president of the New York League of Women Shoppers (letter); Miss Theresa L. Morris, chairman of the Westchester group of the same organization; Madeline Ross

of the Consumers Union of United States.

While there was solid opposition to the proposed F.T.C. rulings on the part of textile and allied groups, this opposition was not based solely on opposition to the principle of colorfastness standards, but rather to the particular proposals of the F.T.C. for reasons stated and repeated in many quarters.

On the other hand, the belief has existed and has been mentioned privately and in accounts of the hearing that they are not so much the product of the F.T.C. as of outside radical groups.

## OPA Ups Soap Wholesale Prices

Relief from the price squeeze brought to bear by the general maximum price regulation was granted ten soap wholesale dealers on September 13, by the OPA. Because these wholesalers had failed to raise their prices by March following increases by the soap manufacturers in January and February, their prices were not frozen by the GMPR at representative levels. The revised prices allow the wholesalers a three per cent gross markup over low cost of acquisition for the soaps. This is indicated to be the minimum markup under which wholesalers can handle these products successfully.

## Tone-Tex Dealer Campaign

Tone-Tex Products, Chicago, is currently conducting an extensive dealer campaign on behalf of "Tone-Tex," a scouring powder for kitchen use. The product is packaged in red, green, blue or black containers, to match bathroom and kitchen color schemes.

## Cancel DC&AT Meeting

Cancellation of the annual fall meeting and golf tournament of the Drug, Chemical & Allied Trades Section of the New York Board of Trade was announced recently in a bulletin sent out by Victor E. Williams, chairman. The action was taken in compliance with a request of the Office of the Defense Transportation that all non-essential travel be eliminated.



# BACKGROUND VALUES . . . a PART of the product, APART from the price



EACH year since 1925—and until the present war made unrestricted travel abroad impossible—our firm has sent its representatives on carefully planned field trips to the world's principal producing centers of essential oils. The miles traveled and the dollars expended to bring the fruits of these investigations back to this country have run into the countless thousands. The very fact that we conducted this program on our own initiative and disseminated the facts and information thus gathered through published articles for the whole trade's benefit is indicative of the thoroughness with which all phases of our business are conducted.

Thus, the excellence and reliability of every product bearing the Fritzsche label, whether it be compound, synthetic or straight essential oil, results directly from our complete knowledge of the cultivation and production of



the basic materials employed. Manufacturers, therefore, who use F. B. products consistently, can do so with every confidence that they are getting the best in materials and values that skill, scientific knowledge and modern facilities can provide.

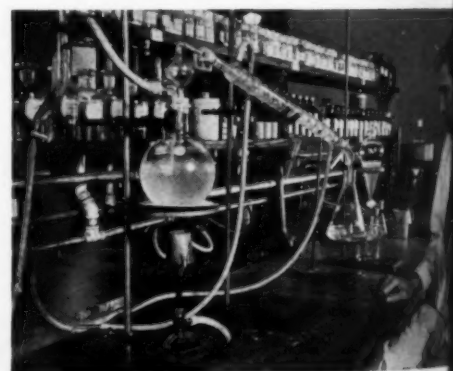
*Photos: Top—Our investigations began seventeen years ago in Southern France with field studies of jasmine and lavender. Center—Published articles and reprints placed this previously unavailable data within reach of the entire industry. Bottom—Through our laboratories, the benefits from these pioneering studies are being passed along constantly to our customers.*



## FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS  
BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.  
FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE





## Set Fat Salvage Quotas

THE fat salvage drive has really begun to roll! Spot reports of results in widely varied sections of the country indicate this. One, by Swift & Co., according to a report in the *Scraper*, newly formed organ of the American Industries Salvage Committee, showed that Swift's rendering plants in 11 states had received three times the amount of waste fats in the "last six weeks" (mid-September) than had been received in the similar preceding period. That the campaign would get off to a slow start and might then grow cumulatively was pointed out in an article in *Soap & Sanitary Chemicals* last month. This is further borne out by two scattered reports, one from Los Angeles, the other from New York. In Los Angeles, the fat collection reached a total of 60,000 pounds for the week of August 22. This just doubled the figure for the previous week. Likewise in New York, the collection figures for the final week of August doubled those for the same period in July.

As the campaign heads into its fourth month on a national scale, its objectives have become more clearly defined. On September 4, the WPB outlined what it expected from the nation as a whole, from states, from cities of 100,000 population and up and from citizens living on farms and

in urban localities. In this way an annual goal of one-half billion pounds for the United States was set. To get some idea of how effective the campaign is expected to be, it is well to remember that formerly an estimated two billion pounds of household fats were wasted—poured down the drain, thrown out, etc. According to the WPB figures, city people are expected to contribute a higher per capita share than country folks. For farm dwellers the figure is 2.8 pounds per capita for a year; for city people 4.5 pounds. This difference is due to the fact that farm people use waste fats in home soap making and as feed for livestock, "both consistent with the drive policy of getting fullest use from all fats before considering them as 'waste.'" Whether these figures took into consideration the meat shortage and accompanying rationing has not been determined. However, since these figures were issued some time in advance of meat rationing talk, it is not thought likely.

The importance of the part the soldiers are playing in this drive cannot be underestimated when it is considered that they will contribute an estimated two pounds per man per month! Figuring that there will be an average of four million men under arms over a twelve-month period, that

gives the staggering total of 96,000,000 pounds a year. In civilian life, New York's quota naturally is tops: 23,552,000 pounds for the year. New York State shows the way in the state columns with a voluminous yearly total of 56,700,000 pounds. Nevada's sparsely settled area has the tiniest quota—400,000 pounds. And, incidentally, this state is reported to be in a position to match its quota not later than October, so great have been its gains since starting.

Naturally, in a program of this size problems are likely to arise and many questions have arisen. In an effort to clarify the workings of the waste fats salvage plan, the WPB, on September 5, issued a list of questions and answers dealing with various phases of the plan. Many of these questions and answers dealt with the price policies of the plan. Others asked: "Must housewives go to the trouble of straining their fats through a fine cloth?" Answer: "Experience has shown that ordinary metal kitchen strainers adequately remove meat scraps and other foreign matter from fats." The question of using glass jars and paper containers was answered in this way. "Paper and glass containers are not suitable for kitchen fat collection. Most renderers toss the fats and containers into giant steam kettles to melt the fat out of the containers. Paper containers break up in the process, which necessitates additional straining. Glass jars, if they haven't already cracked and chipped when the hot drippings are poured, will certainly do so in the rendering process." An interesting question dealing with the amount of use fats should be given before they are turned in was answered in this way: "Since the object of the campaign is to make America's supply of fats go as far as possible, each housewife is expected to get maximum cooking use and food values from her kitchen fats before turning them over to her meat dealer." The WPB also went on to point out that dark fats produced just as much glycerine as light fats.

In measuring the increasing success of the current campaign, no little responsibility should be placed at the doorstep of radio. It has co-





*Quality* is **RATED** by  
**UNIFORMITY**

**PRESERVE BOTH WITH PORTER PROCESSING EQUIPMENT**

Your customers must know that your product on repeat orders will be of the same quality, uniformity of dispersion and freedom from contamination. Porter processing equipment is designed, engineered, and constructed to achieve these characteristics in your batches.

**H. K. PORTER COMPANY, INC.**, builds equipment for your particular operation. Write for complete information.

■ **WHIRLPOOL PORTABLE AGITATOR.** Designed to furnish low cost agitation where a permanent agitator is impractical, and where simplicity of operation is required without sacrificing quality. Available with direct drive for high speed agitation of thin liquids, or with gear drive for mild agitation of both light and heavy liquids.

■ **DOUBLE RIBBON MIXER.** For fast, complete mixing of materials ranging from powders to heavy pastes. Countermixing ribbons create a folding action to insure perfectly mixed batches. Hinged covers and lever-operated discharge gates permit fast charging and discharging. Available in 22 sizes to suit specific operations.

■ **DOUBLE CONE BLENDERS.** For intimate mixing and blending dry powders and crystals. These blenders employ anti-friction bearings, integral motor drive stands, high quality batches in minimum production time.

**H. K. PORTER COMPANY, INC.**  
PROCESS EQUIPMENT DIVISION  
PITTSBURGH PENNSYLVANIA



**BARRETT CHEMICALS**

**FOR THE SOAP AND DISINFECTANT INDUSTRIES**

America's all-out Victory Program requires ever increasing quantities of coal-tar chemicals for which Barrett is a key source of supply. All Barrett's facilities and 88 years of manufacturing experience are being utilized to keep production at top limits. But because so many Barrett Chemicals are vital to winning the war, we ask the indulgence of our customers in civilian industries if deliveries are delayed.

U. S. P. CRESOL  
CRESYLIC ACID  
U. S. P. PHENOL  
TAR ACID OIL  
NAPHTHALENE  
PARA CHLOR META CRESOL  
CHLOR XYLENOL  
PYRIDINE  
XYLOL  
CYCLOHEXANOL  
METHYLCYCLOHEXANOL  
ANHYDROUS AMMONIA

**THE BARRETT DIVISION**  
ALLIED CHEMICAL & DYE CORPORATION  
40 RECTOR STREET, NEW YORK

... ONE OF AMERICA'S GREAT BASIC BUSINESSES

operated magnificently, both in explaining the urgency of the salvaging of the fats and the workings of the campaign. Another medium is the motion picture industry which has produced the Walt Disney picture: "Out of the Frying Pan Into the Firing Line." This humorous film is being shown in some 15,000 theatres throughout the United States at the present time.

An unusual vehicle for the promotion of the waste fats salvage campaign is that of Union Bag & Paper Corp. This manufacturer of some seven billion grocery bags a year is devoting printing space on 10 per cent of its bags to government projects such as salvage, nutrition, War Bonds, etc. Among the first three items selected for this purpose is Fat Salvage. Printing on these bags will be without extra cost to the grocer, who will distribute them as a patriotic service.

As yet, no official figures have been issued by the Conservation Division of the WPB which is officially sponsoring waste fat salvage. However, a recent release by the WPB stated that monthly reports for the areas (states and cities of over 100,000 population) will be issued shortly showing actual fat collections. Private estimates by the Great Atlantic and Pacific Tea Co., based on their own experience, are that American housewives have turned in about 4,500,000 pounds of salvaged fats in the first nine weeks of the campaign. In its own stores 362,000 lbs. were collected during July, August and the first week of September.

#### Henderson on Advertising

One by-product of the recent roll-back in the price of tallow, fats and greases was a further clarification of Mr. Henderson's attitude toward advertising. This by-play, recorded in the *Congressional Record* for August 20, came about in an exchange of letters between him and H. P. Fulmer, chairman of the House Committee on Agriculture. According to a bulletin sent out by the American Association of Advertising Agencies, and reported in the September 4 issue of *Printers' Ink*, "Congressman Ful-

mer charged that an OPA adjustment of prices on tallow, fats and greases had been permitted by Henderson so that large manufacturers of soap 'would be able to continue to make their usual large profits, which would enable them not only in peacetime, but during this great emergency when we are spending billions in trying to win this war, to advertise in the press, over the radio, and any other method whereby they might be able to increase their sales and their cash surpluses. . . .'

In reply Henderson said in part: 'At the time this voluntary roll-back became effective, the soap manufacturers submitted that the price increase they had announced beginning with the end of February, 1942, was necessary to the maintenance of their operations in view of the ceiling prices on tallow, fats and greases. Thereupon this Office instituted an investigation of the costs and margins of the three largest soap manufacturing com-

panies. In line with previously announced policy, normal advertising layouts were considered as costs in this investigation. Any other policy with respect to advertising might well result in the destruction of the entire advertising industry, an end that is beyond either the authority or the inclination of this Office.

"May I point out, however, that extraordinary layouts for promotional campaigns, such as Swan soap, were not considered as costs in our margin investigation. This investigation showed that in the case of each of the three companies, the margins between the March ceiling prices of tallow, fats and greases and the 'rolled-back' prices of the soap manufacturers were inadequate to the maintenance of necessary soap production. . . .'

"Our decision that the reduction was a necessary step was based entirely on our own investigation into the costs and profits of the manufacturing companies. . . ."

#### WPB Amends Glycerine Order

Methods to be employed by glycerine users and producers in filing requests and reports for allocations with WPB were changed September 5, in Amendment I to General Preference Order M-58 by rewriting section D of that order dealing with glycerine restrictions. The new procedures are to conform to the WPB policy of allocating in advance only shipments of 10,000 pounds or over, and of filling orders from 50 to 10,000 pounds pursuant to directive. The same forms, PD-361, PD-362 and PD-363, are to be used under the new procedure as have been used in the past.

Under Form PD-361, persons who used, consumed or resold more than fifty pounds of glycerine in any one month of the six months ending March 31, 1942, were required to file on or before the 15th of September a single copy of this form with the WPB. This is the form that the United States Census Bureau sent out in May to a selected list of glycerine consumers. Those who returned it then are not required to do so again. Consumers who have not filed this form must do so when they submit their first PD-362 application.

PD-362, which is the purchaser's application for delivery of glycerine, must be filed by: (1) Every purchaser who seeks delivery of more than 50 pounds of glycerine in any one month for one consuming plant. Separate applications are required for each branch plant. (2) Distributors who buy for resale file not only PD-362, but also 363 and 363A. (3) A company that consumes as well as produces glycerine, files PD-362 covering consumption. These forms must be filed on or before the 15th of the month preceding the month shipment is desired.

Form PD-363 must be filed before the 20th of the month preceding the one in which delivery is desired by producers, refiners or distributors of more than 10,000 pounds of glycerine. This form requires the listing by the company of all customers requiring more than 10,000 pounds from all sources.

PD-363A is to be filed not later than the 15th of each month by refiners, producers and distributors showing among other things supply of glycerine for the current month and the estimated supply for the succeeding month.



# These Crown Cans go to the Front!

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★



PHOTO BY U. S. ARMY SIGNAL CORPS

**Y**OU know how a rifle or shot-gun kicks back when you fire it. Ever stop to figure out what took up the recoil of a big Howitzer, a 90 mm. Anti-Aircraft gun or a 37 mm. Anti-Tank gun?

Well, it's oil that does the trick... heavy recoil oil! And just as you use up brake-fluid in your car the time comes when recoil oil has to be replenished.

And that's where Crown Can comes in!

Heavy Recoil Oil for the artillery is shipped right up to the front in gallon cans... made by Crown... to Army specifications... and supplied to manufacturers filling these orders.

**CROWN CAN COMPANY, PHILADELPHIA, PA.,** *Division of Crown Cork and Seal Company.* Baltimore • New York • St. Louis • Houston • Madison • Orlando • Fort Wayne • Nebraska City

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

## CROWN CAN



# BIDS AND AWARDS

## Treasury Procurement Bids

In a recent opening by the Treasury Procurement Department, Washington, D. C., for miscellaneous supplies, the following low bids were submitted: Imperial Products Co., Philadelphia, 14,400 lbs. of scouring compound at 2.82c a lb.; National Milling & Chemical Co., Philadelphia, 30,000 lbs. of scouring compound at 1.40c a lb. and 22,500 lbs. of scouring compound at 1.35c a lb.; Stevens Soap Co., Brooklyn, 30,000 lbs. of scouring compound at 1.62c a lb.; Scholler Brothers, Philadelphia, 10,000 lbs. of automobile soap at 7c a lb.; M. J. Gensburgh & Son, Washington, D. C., 20,000 lbs. of sweeping compound at 2.45c a lb.; Milburn Co., Detroit, 1,000 lbs. of cleaning compound for Washington, D. C., 16c a lb.; James Huggins & Sons, Malden, Mass., 1,000 1-gal. containers of disinfectant at 54c a gal., 500 gal. 5-gal. containers of disinfectant at 49c a gal., 5,500 gal. 55-gal. drums of disinfectant at 44c a gal.; identical bids by James Huggins & Sons, and Baird & McGuire, Holbrook, Mass. were submitted on 250 gals. of cresol solution at \$1.15 a gal.; New Brunswick Laboratories, New York, 1,200 lbs. of soap at 36c a lb.; Allied Chemical & Dye Corp., New York, 500 lbs. of naphthalene at 8.45c a lb.; Reilly Tar & Chemical Co., New York, 5,000 lbs. of naphthalene, at 8.47c a lb.; Fuld Brothers, Baltimore, 600 qts. of automobile polish at 15c a qt.; J. L. Prescott Co., Passaic, N. J., 4,880 qts. of metal polish at 9.5c a qt. and 6,768 containers shoe polish at 5c a container; Imperial Products Co., Philadelphia, 960 gals. of metal polish at 26.4c a gal.; Stahl Brothers, Buffalo, N. Y., 150,000 lbs. toilet soap at 9.6c a lb.; Larkin Soap Co., Tenarch, N. J., 14,400 lbs. of grit soap at 5.25c a lb.; John T. Stanley Co., New York, 20,250 lbs. of grit soap at 12c a lb.; Colgate - Palmolive - Peet Co., Jersey City, N. J., 180,000 lbs. of laundry

soap at 5.38c a lb.; Reilly Tar & Chemical Corp., New York, 1,000 lbs. of flake naphthalene at 8.72c a lb. and 1,000 lbs. ball naphthalene at 8.47c a lb.

## N. Y. Navy Bids

In a recent opening by the New York Navy Purchasing Office, New York, for miscellaneous supplies, the following low bids were submitted: Potomac Chemical Co., Washington, D. C., 500 gals. of polar type rust-preventive compound at \$1.32 a gal. and Piedmont Paint Manufacturing Co., Greenville, S. C., 30,000 lbs. cleaning compound for painted surfaces at 6.842c a lb.

## N. Y. Navy Awards

The following awards were made by the New York Navy Purchasing Office, New York, in a recent opening for miscellaneous supplies: James Good, Philadelphia, 111,300 pounds of soft soap, \$7,301.72; Crystal Soap & Chemical Co., Philadelphia, 300,000 tins of cresolic disinfectant at \$86,616.

## Cleaning Liquid Bid

Shell Oil Co., San Francisco, submitted the low bid on 75,000 gals. of cleaning liquid at 10.094c a gal., in a recent opening by the Washington Navy Yard, Washington, D. C.

## Panama Soap Bids

The following low bids were submitted in a recent opening in Washington, D. C., for miscellaneous supplies for the Panama Canal: Original Bradford Soap Works, West Warwick, R. I., 20,000 lbs. of chip soap at \$1,800; Pioneer Soap Co., San Francisco, Calif., 2,500 lbs. of grit soap at \$200; Colgate-Palmolive-Peet Co., Jersey City, N. J., 45,000 lbs. of laundry soap at \$2,551.50, and 60,000 lbs. of salt-water soap \$3,456; Los Angeles Soap Co., Los Angeles, 7,500 lbs. of toilet soap at \$799.50; Procter & Gam-

ble Distributing Co., Baltimore, 15,000 cakes of toilet soap at \$220.18; Chemical Manufacturing & Distributing Co., Easton, Pa., 50,000 lbs. of soap powder at \$1,605. In the same opening Chemical Manufacturing & Distributing Co., submitted the low bid of 20,000 lbs. of trisodium phosphate at \$788.

## N. Y. Navy Soap Awards

The following awards were made by the New York Navy Purchasing Office, in a recent opening for miscellaneous supplies: Seacoast Labs., New York, N. Y., with a low bid of 3.9c for 136,000 pounds of cleansing powder; Colgate-Palmolive-Peet Co., Kirkman Soap Div., Brooklyn, 216,000 12-oz. bars of yellow laundry soap at 4.32c.

## Floor Wax Award

Chadakoff Chemical Products Co., New York, was awarded the contract for 66,000 gals. water-emulsion floor wax at 48.5c a gal., to be divided between Veterans Administration at Perrysville, Md. and Hines, Ill., in a recent opening by the Veterans Administration Procurement, Washington, D. C.

## Marine Floor Wax Award

In a recent opening by the Marine Corps, Washington, D. C., the Windsor Wax Co., Hoboken, N. J., was awarded a contract for 15,000 lbs. of floor wax at 13.39c.

## Grit Soap Award

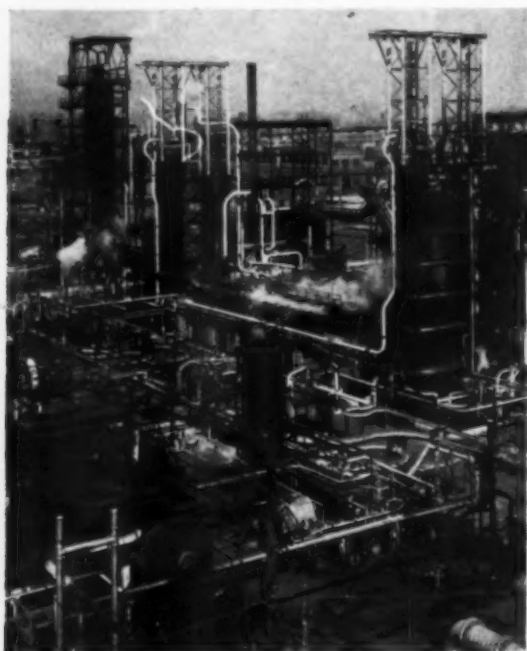
Day & Frick, Philadelphia, was awarded a contract for 100,000 10-oz. cakes of grit soap at 3.15c in a recent opening by the New York Navy Purchasing Office, New York.

## Panama Canal Bids

In a recent opening for the Panama Canal, Washington, D. C., Synthetic Lacquer & Varnish Co., Philadelphia, submitted the low bid on 3,000 gallons of cleaner and renovator at 63c. In the same opening Sweeping Compound Manufacturing Co., New York, submitted a low bid of 1c for 100,000 pounds of mineral oil sweeping compound in 300-pound barrels.

# ACUTE SHORTAGES!

THE U. S. NEEDS ALL SCRAP FROM YOUR PLANT  
FOR PLANES...TANKS...SHIPS...GUNS...AMMUNITION



SELL THE SCRAP FROM YOUR  
PLANT NOW



HALF OF EVERY GUN, TANK AND  
SHIP IS MADE OF SCRAP STEEL

*This message approved by Conservation Division*

**WAR PRODUCTION BOARD**

*George*  *Lueders & Co.*

427 WASHINGTON STREET, NEW YORK, N. Y.

BRANCHES : CHICAGO : SAN FRANCISCO : MONTREAL

REPRESENTATIVES: ST. LOUIS—PHILADELPHIA

Essential Oils • Aromatic Chemicals

Established 1885

Perfume Materials • Colors

# TRADE MARKS

The following trade-marks were published in the September issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

## Trade Marks

**PLEE-ZING**—This in solid letters within an oval describing a sink cleaning preparation. Filed by Fisher Scientific Co., Pittsburgh, July 16, 1942. Claims use since October, 1931.

**MARTY'S**—This in long hand for a glass cleaner. Filed by Martinus J. Dyrud (Dyrud Labs.) Prairie du Chien, Wis., August 14, 1941. Claims use since March, 1941.

**ETHIOMINE**—This in block letters to describe a germicide. Filed by Thomas Leeming & Co., New York, July 16, 1942. Claims use since July 2, 1942.

**TWENTY-X**—This in solid letters to describe an insecticide. Filed by California Spray-Chemical Corp., Wilmington, Del., and Richmond, Cal., July 27, 1942. Claims use since July 13, 1942.

**CRYSTOX**—This in block letters to describe compounds for insecticides. Filed by Shell Chemical Co., San Francisco, July 27, 1942. Claims use since June 5, 1942.

**LITHOTINE**—This in solid letters to describe a wash for metal and composition rollers. Filed by Lithographic Technical Foundation, New York, July 28, 1942. Claims use since 1933.

**NYRAY**—This in solid letters describing soap. Filed by Colgate-Palmolive-Peet Co., Jersey City, N. J., Mar. 17, 1942. Claims use since Feb. 10, 1942.

**CHEMISTRY**—This in solid letters within a fanciful design over the

words "is the keystone of industry" describing fabric cleaning compound. Filed by Pennsylvania Salt Manufacturing Co., Philadelphia, June 13, 1942. Claims use since Apr. 8, 1942.

**GEIGY**—This in a fanciful arrangement describing disinfectants, moth and vermin preparations, and rust preventive. Filed by Geigy Co., New York, June 3, 1942. Claims use since May 13, 1942.

**PEPSODENT**—This in outline letters describing antiseptic. Filed by Pepsodent Co., Chicago, July 11, 1942. Claims use since Apr. 23, 1942.

**MYSTERY**—This in solid letters describing granulated soap. Filed by Plee-Zing, Inc., Chicago, July 2, 1942. Claims use since Jan., 1933.

**THIOSAN**—This in solid letters describing fungicides. Filed by Bayer-Semesan Co., Wilmington, July 15, 1942. Claims use since June 2, 1942.

**GEM**—This in outline letters above a drawing of a diamond describing floor wax. Filed by Johnson Chemical Co., Brooklyn, Mar. 4, 1942. Claims use since Feb. 15, 1942.

**ONCO**—This in outline script lettering describing cleaned, wax, and polish. Filed by G. W. Onthank Co., Des Moines, Ia., Apr. 4, 1942. Claims use since Mar. 10, 1942.

## Trade Marks Granted

397,337. Painted surfaces paste cleaner. Filed by General Chemical Co., New York, Mar. 20, 1942. Serial No. 451,768. Published June 23, 1942. Class 4.

397,393. Fungicides and insecticides. Filed by G. E. Conkey Co., Cleveland, Jan. 10, 1940. Serial No. 427,296. Published Jan. 7, 1941. Class 6.

397,411. Soaps, washing solutions and cleaning compound. Filed by the Flare Laboratories, Chicago, May 28, 1941. Serial No. 443,994. Published Dec. 16, 1941. Class 4.

397,534. Mothproofing preparation. Filed by Arzone Products Co.,

Chicago, Apr. 11, 1942. Serial No. 452,292. Published June 30, 1942. Class 6.

397,568. Bubble bath. Filed by House of Tre-Jur, Inc., New York, May 1, 1942. Serial No. 452,726. Published June 23, 1942. Class 6.

397,662. Soaps. Filed by Charles W. Young Co., Philadelphia, May 2, 1941. Serial No. 443,212. Published July 15, 1941. Class 4.

397,695. Cleaning compound in liquid and powder form. Filed by The La Renza Co., Cleveland, O., April 7, 1942. Serial No. 452,193. Published July 7, 1942. Class 4.

397,667. White shoe cleaner. Filed by Roch D. Kawerk, doing business as Victory Products Co., Birmingham, Ala., Sept. 29, 1941. Serial No. 447,396. Published July 7, 1942. Class 4.

## BIMS End Golf Season

BIMS of New York closed the 1942 golf season at the Ridgewood Country Club, Ridgewood, N. J. on September 22 with 100 members and guests in attendance for the golf tournament and dinner. In presenting the prizes to the winners following dinner, Martin Schultes of Hewitt Soap Co., chairman of the New York BIMS, stated that there might be no further golf tournaments for the duration of the war and that the Ridgewood gathering could conceivably be the last meeting for several years to come. However, several dinner meetings will be held in New York during the coming winter, dates to be announced later, according to Mr. Schultes.

Among the day's low scorers were Paul A. Dunkel of Paul Dunkel & Co., Louis Bezaud of Bourjois, Inc. and Ralph M. Stevenson of Givaudan-Delawanna, Inc. for the members, and Herbert Parker, guest of Harry Heister of George Lueders & Co. Other prize winners included,—all prizes were war stamps,—Theodore M. Hanlon, Caron Corp.; C. B. Robbins, Allen B. Wrisley Co.; Harry G. Griffiths, Pennsylvania Drug Co.; Geo. P. Dunn, Smith & Nichols, Inc.; Harris Whitaker, Bourjois, Inc.; Russell Boland, Topics Publishing Co.; O. Dexter Neal, Hilton Davis Chemical Co.; Walter



# RAW MATERIALS FOR THE SOAP INDUSTRY

## FATTY ACID SUBSTITUTES FOR COCONUT OIL

Mixtures of Vegetable oil fatty acids to replace coconut and other high-glycerine content oils now unavailable to many soap makers. It will pay you to investigate these replacement materials at once. Write for samples and prices.

Caster Oil  
Cone Oil  
Cottonseed Oil  
Olive Oil

Olive Oil Fats  
Peanut Oil  
Rapeseed Oil  
Sesame Oil

Soya Bean Oil  
Fatty Acids  
Lard Oil  
Neatsfoot Oil

Oleo Stearine  
Stearic Acid  
White Olein  
Tallow

Grease  
Lanolin  
Caustic Soda  
Soda Ash

Borax  
Caustic Potash  
Carbonate Potash  
Sul Soda

Boric Acid  
Modified Soda

Silicate Soda  
Metasilicate  
Tri Sodium Phosphate

Di Sodium Phosphate  
Chlorophyll  
Superfating Agent

## DRY ALKALIES

A recent innovation in Welch, Holme & Clark service is the mixing of dry alkalies for private formula products. Let us handle this operation for you.

**WELCH, HOLME & CLARK CO., Inc.**  
563 GREENWICH STREET ESTABLISHED 1838 NEW YORK CITY

**"N. B.—For the Soap and Cosmetic Industry"**

**WOBURN**

DEGREASING CO. OF N. J. HARRISON, N. J.

Glycerine free

**PALM OIL FATTY ACIDS**

are the

**Logical Solution for Soap and Cosmetic Manufacturers Who Wish the Benefits of a Palm Oil Soap**

**Permits More Economical Manufacture than from Whole Palm Oils**

**Available in Carload Quantities for Prompt Shipment**

Also Coconut Fatty Acid Replacements, "Seedline" for rubber formulations, Synthetic Drying Oils for Protective Coatings

FATTY ACIDS	PRINCIPAL USES	CHEMICAL CHARACTERISTICS			
		Acid No.	Saponification No.	Iodine No.*	Titre °C
Palm Fatty Acids, Single Dist.	Soaps .....	196-203	198-206	40-55	42-46
Palm Fatty Acids, Double Dist.	Textile finishing compounds, soaps.	198-203	200-206	38-55	44-48
Palm Fatty Acids, Split .....	Soaps .....	185-195	195-203	48-56	42-46

\* Hanus Method used in determining iodine numbers

**America's Foremost Producer of Specification Fatty Acids and Synthetic Drying Oils**



L. Fretz, Dodge & Olcott Co.; Thomas Morgan, "Soap"; Lee Clemner, Topics Publishing Co.; Robert C. Spencer, Lowe Paper Co.; William F. Zimmerman, Helfrich Labs. of N. Y.; William Haebler, Van Ameringen-Haebler; Everett Proops, Proops Management, Inc.; Walter S. Nuckols, Swindell Bros.; Albert C. Burgund, Carr-Lowrey Glass Co.; W. Van Alan Clark, Allied Products; William H. Green, Addison Lithograph Co.; Ira P. MacNair, "Soap"; Joseph F. Kelly, Hagerty Bros. & Co.; Harry Heister, George Lueders & Co.; Herbert T. Georgi, Houbigant Sales Corp.; Walter Smith, Affiliated Products, Inc.; Peter L. Forsman, C. H. Forsman & Co.; Irving S. Goodwin, Yardley & Co., Inc.; C. R. Keeley, "Toilet Requisites"; Charles W. Darr, Harriet Hubbard Ayer.

#### Clinton W. Soverel Passes

Clinton W. Soverel, 75, died Monday afternoon, September 14, at Carolina Beach, North Carolina, after an illness of several years. He was with Colgate-Palmolive-Peet for 17 years prior to his retirement from that company, on June 30, 1929. For 20 years previous to his association with C-P-P, Mr. Soverel was employed by Sherwin Williams Paint Co. in Wilmington, Pittsburgh and Boston. He started out in the laundry sales division of Colgate on January 17, 1912, and was connected with the sales division for the next 15 years until 1927 when he became manager in charge of the New York office.

#### Columbia Chemical Moves

The executive sales office of the Columbia Chemical division, Pittsburgh Plate Glass Co., as well as the division's traffic and advertising departments, has been moved from New York to Pittsburgh, it was made known recently.

#### Offer Tallow Tank Cars

John Morrel & Co., midwestern meat packing concern, has offered six of its twenty-five tank cars to the government for use in transporting fuel oil. The cars were formerly used by the company to transport tallow and other packing house greases.

#### Introduce "Swerl" in Chicago

"Swerl," a new "soapless suds" for laundry, dishwashing and bath use, was introduced a few weeks ago to Chicago housewives through newspaper display ads and billboard posters. A similar campaign is understood to have been used in Cleveland and Columbus, O., following preliminary test campaigns in Syracuse and Utica, N. Y., and Grand Rapids, Mich. H. J. Heinz Co., Pittsburgh, is the distributor.

#### Adam Bialecki, Perfumer, Dies

Adam A. Bialecki, in charge of the soap perfume laboratory for Givaudan-Delawanna, New York, died recently at Niagara Falls, N. Y. He was 53 years old. Following a long association with Armour & Co. as chief perfumer, he joined the research and technical staff of Albert Verley & Co., Chicago, in 1937. In 1941 he went with Givaudan-Delawanna and was on a leave of absence at the time of his death.

#### Oakite Concludes Display Contest

Oakite Products, Inc., New York, has awarded first prize in its Oakite Mass Display contest to Fair Haven Market, Fair Haven, N. J. Sixty-nine other winners of places have been announced in this popular dealer promotion campaign.

#### Chicago Assns. End 1942 Golf

The final golf meeting of the golf auxiliaries of the Chicago Drug and Chemical and the Chicago Perfumery, Soap and Extract Associations was held in perfect weather at Evans-ton Country Club, Sept. 22. Thirty-two members and thirty-two guests participated. Following is the list of prize winners in the various classes. Figures following each name indicate gross, handicap and net score in that order.

Class A—1st, B. Puffer, 78-11-67; 2nd, J. Leavitt, 76-6-70; 3rd, H. A. Westerman, 87-16-71; 4th, C. W. Allen, 74-2-72.

Class B—1st, A. C. Stepan, Sr., 89-21-68; 2nd, M. Folds, 86-17-69; 3rd, W. Nay, 88-17-71; 4th, R. Morris, 90-18-72.

Class C—1st, H. J. Edmon,

90-22-68; 2nd, H. Van Hoben, 96-24-72; 3rd, J. A. A. Scott, 95-22-73; 4th, E. L. Drach, 108-28-80.

Class D—1st, D. Sappenfield, 112-33-79; 2nd, V. Farrar, 112-31-81; 3rd, A. Carnes, 114-33-81; 4th, A. E. Miller, 129-47-82.

Guest prizes were awarded as follows on scores indicated: R. McClelland, 86-14-72; George Williams, 84-7-77; M. A. McClelland, 84-11-73; Joe Hurley, 80-6-74; George Hendrickson, 90-16-74; W. O. Gairns, 83-8-75. Merchandise prizes were awarded to first and third place winners and war savings stamps to those placing second and fourth.

#### John N. Ebert Dies at 39

John Neville Ebert, vice-president of Pumice Corp. of America, Grants, New Mexico, died suddenly September 4, in Gallup, N. M., where he and Mrs. Ebert had taken a room in a hotel for the night. He was 39 years old. Mr. Ebert had been with Barnsdall Tripoli Corp., Seneca, N. Y., for 17 years prior to its sale of the Pumice Corp. property a year and a half ago when Mr. Ebert became vice-president and general manager of the pumice plant in Grants.

#### Form Oil Import Group

The first meeting of the Emergency Group for Foreign Vegetable Oils, Fats and Oil-Bearing Materials took place September 30, at the offices of the Commodity Credit Corp., 60 Beaver Street, New York. This group was formed under the auspices of the CCC and the Board of Economic Warfare as a war-time association to act as the exclusive agent of the CCC in the importing and handling of foreign vegetable oils, fats and oil-bearing materials.

#### Victor Gets "E" Award

Victor Chemical Works at Mt. Pleasant, Tenn., received the Army-Navy "E" award for excellence in the production of war equipment on September 1. The company makes white phosphorous for use in the manufacture of shells, incendiary bombs, tracer bullets, smoke screens and for hardening armor plate.



## AVOIDING "WAR SOAP"

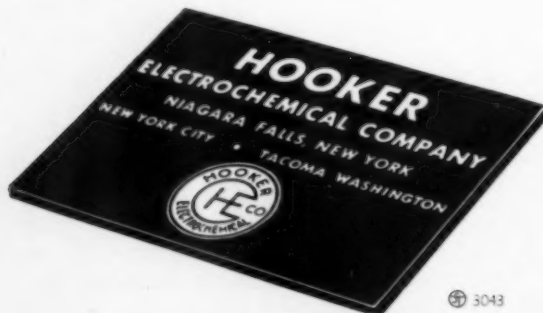


According to overseas reports, Europe's soaps are far indeed from America's standards. As soap making becomes more and more difficult here, maintenance of best available quality calls for extra care in choice of chemicals used.

## HOOKER CHEMICALS

for makers of soaps and sanitary chemical preparations will meet your specifications and expectations at all times. Among the four-score HOOKER products are Bleaching Powder, Caustic Soda, Cyclohexanol, Dichlor Naphthalene, Liquid Chlorine, Methyl Benzoate, Methyl Cyclohexanol, Orthodichlorbenzene, Paradichlorbenzene, Trichlor Benzene.

HOOKER technical specialists are always available for help in solving chemical problems within their fields.



3043



**N**ATURALLY, Malmstrom's Ninco Brand Lanolin . . . America's No. 1

Lanolin, offers the user of Lanolin the advantage of positive uniformity.

It's an extra something that's the result of Malmstrom research to improve the quality and value of Ninco Brand

Lanolin and allied products.

To check results on a commercial basis order a quantity today, or send for free testing sample.



**America's  
No. 1 Choice  
Because It's  
5 WAYS  
BETTER**

1. LOWEST **ODOR** VOLUME
2. GREATER **UNIFORMITY**
3. BETTER **COLOR** QUALITY
4. SMOOTHER **TEXTURE**
5. FINER **BODY** CONSISTENCY

## N. I. MALMSTROM & CO.

America's Largest Suppliers of **LANOLIN** • Anhydrous U.S.P. • Hydrous U.S.P. • Absorption Base • Technical **DEGRAS** • Neutral and Common • **WOOL GREASES**

147 LOMBARDY STREET • BROOKLYN, NEW YORK

STOCKS CARRIED IN CHICAGO • KANSAS CITY • MINNEAPOLIS • LOS ANGELES • SAN FRANCISCO

# MARKETS

As of October 2, 1942

**T**HE market for fats and oils displayed a firmer tone this past month, with prices pretty well maintained and offerings light on most materials. There was a scarcity of offerings on many materials under pressure of increased demand and shortening supplies.

The oils and fats situation has suddenly been pushed into the spotlight of a barrage of national publicity by the issuance of a sheaf of news, revisions and orders from Washington during recent weeks. Importance was attached to the revision of Order M-71 setting at 90 per cent of 1940-41 use the amount of fats and oils that might be used in the manufacture of soap in quarterly periods beginning September 1. One exception was granted. That set a 119 per cent quota for the amount of foats that could be used. The severity of this restriction was deadened by the height of the consumption period against which the per centages are applied. There is a negatively favorable factor in that there has been a decline in demand. As to M-71's effect on the market, it is still too early to be measured accurately and judgment should be withheld, it was felt, pending clarification under actual working conditions.

Inedible tallow and grease offerings were light in the period just closed despite active interest on the part of buyers. Ceiling prices prevailed and precluded the possibility of fluctuation in this department.

In the vegetable oil category, interest continues to focus on soybean oil, peanut, cotton seed and corn. With the last of the former imports

being used up at the present time, the demand for futures on these domestic vegetable oils, soybean in particular, grows. However, trading has been light since most of the oils have been committed for future deliveries. Moderate volume in some was reported at the established ceiling prices. Other fats and oils were steady though slow moving for the most part. A stir of activity was precipitated by the castor oil allocation order which went into effect October 1. In some instances castor oil handlers reported receiving a flock of orders, although this was by no means universally experienced.

A census report from the Department of Commerce reveals that tallow supplied 622,539,000 pounds of the entire 1,012,249,000 pounds of fats and oils used in the making of soap for the first six months of 1942. The grease figure stood at 169,273,000 pounds; fish oils 24,422,000; marine mammal 12,403,000; palm oil down to 41,436,000; and coconut 98,512,000.

Essential oils and aromatic chemicals registered few price changes. On the whole, these few revisions were, in the main, upward. Bois de Rose (Brazilian Cayenne) was the exception whose range dipped from \$5.00-\$5.25 to \$4.75-\$5.00. Red and white thyme advanced in price, as did natural menthol. Sales of perfuming materials continue to hold up well in comparison to last year. The decreased use of fats and oils in soaps was expected to reduce essential oil and aromatic chemical volume to some extent, as indeed it has. However, since last year was such a good year, sellers of perfuming materials have still continued to do a good volume of business in spite of the drop.

Pyrethrum extract and powder have been stabilized with no changes in price reported. Apparently, increasing government demands have been responsible for a reported reduction in the amounts of pyrethrum allocated for household insecticides.

## Thalacker Heads Detroit Rex

A. O. Thalacker has been named general manager of Detroit Rex Products Co., metal cleaner manufacturers. Mr. Thalacker, a company executive for the past five years, was named secretary recently. He will continue in that position in addition to being general manager.

## Wm. Fisher's Son A Major

Captain Kenneth A. Fisher, son of William Fisher, Magnus, Mabee & Reynard, New York, has just been raised to the rank of major in U. S. Marine Corps. A flyer, he is stationed somewhere in the South Pacific.

## Stanley Whiteway Enlists

Stanley Whiteway, advertising manager of Proctor & Schwartz, Inc., Philadelphia, builders of industrial drying and textile machinery, has enlisted in the Signal Corps Reserve of the United States Army. On completion of special instruction in radio communications he will go on active duty. He is on leave of absence from Proctor & Schwartz.

## P&G Man Heads CAB Board

Dr. D. P. Smelser, Procter & Gamble Co., has been named chairman of the board of Cooperative Analysis of Broadcasting, which was recently incorporated. CAB was formed twelve years ago to conduct continuous checks on radio listening and was incorporated on a non-profit basis.



# STEARIC ACID

(DISTILLED)

CAKE, FLAKE AND POWDERED  
TECHNICAL AND U.S.P. GRADES

## WHITE PALM OIL FATTY ACIDS

(DISTILLED)

REFINED TALLOW  
FATTY ACIDS

WHITE OLEINE U.S.P.  
(DOUBLE-DISTILLED)

OLEIC ACID  
(RED OIL)

*We Recover All Glycerine for War Purposes*

*Manufacturers Since 1837*

# A. GROSS & CO.

295 Madison Avenue, New York, N. Y.

*Representatives in Various Cities*

*for perfuming*

## Soaps, Shaving Creams and Shampoos

*use*

# MIMOSA S

*a sample is ready for you*



## Compagnie Parento, Inc.

NEW YORK  
DETROIT  
LOS ANGELES

Executive Offices and Laboratories  
CROTON-ON-HUDSON, N. Y.

COMPAGNIE PARENTO, LTD.  
TORONTO, ONT. CANADA

PHILADELPHIA  
CHICAGO  
SAN FRANCISCO



# PRICES

(As of October 2, 1942)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

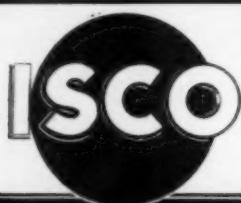
## Chemicals

Acetone, C.P., drums.....lb.	\$ .08	\$ .08 1/2
Acid, Boric, bbls., 99 1/2%.....ton	109.00	131.00
Cresylic, drums.....gal.	.81	.83
Low boiling grade.....gal.	.81	.83
Muriatic, C. P., carboys.....lb.	.08	—
Oxalic, bbls.....lb.	.11 1/4	.12 1/2
Adeps Lanae, hydrous, drums.....lb.	.27	.32
Anhydrous, drums.....lb.	.28	.33
Alcohol, Ethyl, drums.....gal.	8.19	8.25 1/2
Complete Denat., SD1, dms., ex. gal.	.60	.65
Alum. Potash lump, bbls.....lb.	.04 1/2	—
Ammonia Water, 26°, drums.....lb.	.02 1/4	.02 1/2
Ammonium Carbonate, tech., drums.....lb.	.08 1/4	.09 1/4
Bentonite.....ton	25.00	51.00
Bleaching Powder, drums.....100 lb.	2.25	3.35
Borax, pd., bbls., bags.....ton	50.00	75.00
Carbon Tetrachloride, car lots.....gal.	.73	1.17
L. C. L.....gal.	.80	1.27
Cresol, U.S.P., drums.....lb.	.10 3/4	.11 1/4
Creosote Oil.....gal.	.141	.15 1/2
Feldspar, works.....ton	30.00	35.00
Formaldehyde, bbls.....lb.	.05 1/2	.06
Fullers Earth.....ton	8.50	15.00
Glycerine, C.P., drums.....lb.	.18 1/4	.19 1/4
Dynamite, drums.....lb.	.18 1/4	.18 3/4
Saponification, drums.....lb.	.12 3/4	.14 3/4
Soap lye, drums.....lb.	.11 1/2	—
Lime, live, bbls.....ton	6.25	14.50
Mercury Bichloride, drums.....lb.	2.24	2.39
Naphthalene, ref. flakes, bbls.....lb.	.08	—
Orthodichlorbenzene.....lb.	.06	.08 1/2
Paradichlorbenzene, drums.....lb.	.11	.15
Petrolatum, bbls. (as to color).....lb.	.03 1/4	.07 3/4
Phenol (Carbolic Acid) drums.....lb.	.12 1/2	.14 1/4
Pine Oil, drums.....gal.	.50	1.05
Potash, Caustic, solid.....lb.	.06 1/4	.06 3/4
Flake, 88-92%.....lb.	.07	.07 1/2
Liquid, 45% basis.....lb.	.02 3/4	.03 1/4
Potassium Carbonate, solid.....lb.	.06 1/2	.06 3/4
Liquid.....lb.	.03	.03 1/2
Pumice Stone, coarse.....lb.	.04	.04 1/4
Rosins (net wt., ex dock, New York)—		
Grade D to H.....100 lb.	3.90	4.06
Grade I to N.....100 lb.	4.06	4.13
Grade WG to X.....100 lb.	4.23	4.25
Rotten Stone, dom., bags.....lb.	.01 1/4	.01 9/10
Silica.....ton	20.00	27.00
Soaps—		
Tallow Chip, 88%.....lb.	.10 1/4	.10 3/4
Powder, 92%.....lb.	.10 3/4	.11 1/4
Powdered, White Neutral.....lb.	.25 1/2	.42
Olive Oil Paste.....lb.	.40	—
Shampoo Base.....lb.	.18	.20
Liquid Concentrate, 30-32%.....gal.	.75	.79
Soda Ash, cont., wks., bags, bbls. 100 lb.	1.05	1.45
Car lots, in bulk.....100 lb.	.90	.95
Soda Caustic, cont., wks., solid 100 lb.	2.30	—
Flake.....100 lb.	2.70	2.95
Liquid, tanks, 47-49%.....100 lb.	1.92 1/2	1.95

Soda Sal., bbls.....100 lb.	1.20	1.40
Sodium Chloride (Salt).....ton	14.20	18.00
Sodium Fluoride, bbls.....lb.	.08	.09 1/4
Sodium Hydrosulfite, bbls.....lb.	.17	.18
Sodium Metasilicate, anhyd. 100 lb.	4.00	5.30
Granulated.....100 lb.	2.50	3.55
Sodium Pyrophosphate.....100 lb.	5.25	6.80
Sodium Silicate, 40 deg., drum 100 lb.	.80	1.20
Drums, 52 deg. wks.....100 lb.	1.40	1.80
Tar Acid Oils, 15-25%.....gal.	.27 1/2	.33 1/2
Triethanolamine.....lb.	.18	.20
Trisodium Phosphate, bags, bbls. 100 lb.	2.70	4.30

## Oils — Fats — Greases

Babassu, tanks, futures.....lb.	.11 1/2	Nom.
Castor, No. 1, bbls.....lb.	.14	.14 1/2
No. 3, bbls.....lb.	.13 3/4	.14 1/4
Coconut (without excise tax)		
Manila, tanks, N. Y.....lb.	No Prices	
Tanks, Pacific Coast, futures.....lb.	No Prices	
Copra, bulk, coast.....lb.	No Prices	
Corn, tanks, West.....lb.	.12 3/4	—
Cottonseed, crude, tanks, mill.....lb.	.12 3/4	—
PSY, futures.....lb.	.13 3/4	.14 1/4
Fatty Acids—		
Corn Oil, tanks, Chicago.....lb.	.14	.14 1/2
Coconut Oil, tanks, Twitchell, Chi. lb.	.18 1/2	Nom.
Cotton Oil, tanks, Chicago.....lb.	.14	—
Settled soap stock, Chicago.....lb.	.03 3/4	.04
Boiled soap stock, 65%, Chi.....lb.	.04 3/4	.05
Foots, 50%, Chicago.....lb.	.03 3/4	.04
Castor Oil, split, tanks, N. Y.....lb.	.20 3/4	.21 1/4
Linseed Oil, split, tanks, N. Y.....lb.	.18 1/4	—
Distilled.....lb.	.21	.21 1/2
Myristic acid, distilled, tanks, N.Y. lb.	.19	.19 1/2
Palm Oil, white, tanks, N. Y.....lb.	.13	.13 1/2
Single distilled.....lb.	.12	—
Soybean Oil, split, tanks, N. Y.....lb.	.16	—
Distilled.....lb.	.19 1/2	.20
Red Oil, bbls., dist. or sapon. lb.	.1330	.1420
Tanks.....lb.	.1245	—
Stearic Acid, saponif.		
Double pressed.....lb.	.1580	.1680
Triple pressed.....lb.	.1885	.1985
Greases, choice white, tanks.....lb.	.08 3/4	—
Yellow.....lb.	.08 3/4	—
Lard, city, tubs.....lb.	.12 1/2	.12 3/4
Linseed, raw, bbl.....lb.	.1350	.1370
Tanks, raw.....lb.	.1260	.1280
Olive, denatured, bbls., N. Y.....gal.	4.20	4.30
Foots, bbls., N. Y.....lb.	.19 1/2	Nom.
Palm, Sumatra, cif. New York, Tanks lb.	No Prices	
African, tanks, ex. ship.....lb.	.08 1/4	Nom.
Palm, kernel.....lb.	No Prices	
Peanut, crude, tanks, mill.....lb.	.13	Nom.
Soya Bean, domestic, tanks, crude lb.	.11 1/4	Nom.
Stearin, oleo, bbls.....lb.	.1054	—
Tallow, special, f.o.b. N. Y.....lb.	.08 1/2	—
City, ex. loose, f.o.b. N. Y.....lb.	.08 3/4	—
Teased Oil, crude.....lb.	No Prices	



## Caustic Potash

### DEPENDABLY UNIFORM

... in the forms listed below ... for immediate shipment from stocks at New York, Niagara Falls and other strategic points.

FLAKE • SOLID • GRANULAR • BROKEN  
CRUSHED • WALNUT (88-92% KOH)

Containers of various capacities

LIQUID (45% KOH)

Other strengths if desired

IRON FREE

Also LOW CHLORINE and CHLORINE FREE

Drums and Tank Cars



CALCINED 98-100%  $K_2CO_3$  •  
• HYDRATED 83-85%  $K_2CO_3$

In conveniently handled barrels of 400 lbs. net.

Protected by double heavy moisture-proof paper liners.

LIQUID 47-48%  $K_2CO_3$  Water White • Sparkling Clear

Drums and Tank Cars

### ISCO WAXES & Water Soluble GUMS

... including excellent substitutes for products of foreign origin now no longer to be had ...

Write, wire or phone

**INNIS, SPEIDEN & COMPANY**  
Established 1876

*A National Institution*

117-119 Liberty Street • NEW YORK

CHICAGO • CLEVELAND • CINCINNATI  
BOSTON • PHILADELPHIA • GLOVERSVILLE, N. Y.

# KRANICH

## Shampoo

Liquid Olive Oil Soap

Liquid Vegetable Oil Soap

40% and 30% (Only)

To replace coconut oil soaps

•

## Powdered Soap

U. S. P. Castile (Only)

•

## Potash Soaps

Soft Potash 40%

Hard Potash 70%

U.S.P. XI Green

•

## Scrub Soaps

Plain, Pine, Sassafras

## KRANICH SOAP COMPANY

55 Richards St.

Brooklyn, N. Y.

# SOAPS

(As of October 2, 1942)

**Essential Oils**

Almond, Bitter, Artificial	lb.	\$3.50	\$3.75
Bitter, F.F.P.A.	lb.	4.75	5.00
Sweet, cans	lb.	2.25	2.50
Anise, cans, U.S.P.	lb.	3.35	3.75
Bay, 55-66% phenols, cans	lb.	1.60	2.10
Bergamot, coppers	lb.	32.00	Nom.
Artificial	lb.	2.25	6.50
Birch Tar, rect., cans	lb.	—	—
Crude, cans	lb.	—	—
Bois de Rose, Brazilian	lb.	4.75	5.00
Cayenne	lb.	—	—
Cade (juniper tar), drums	lb.	1.50	Nom.
Cajeput, tech, drums	lb.	—	2.10
Calamus, cans	lb.	—	—
Camphor, Sassy, drums	lb.	—	—
White, drums	lb.	—	—
Cananga, native, cans	lb.	17.00	17.50
Rectified, cans	lb.	18.25	20.00
Cassia, Redistilled, U.S.P.	lb.	10.50	12.00
Cedar Leaf, cans	lb.	1.05	1.35
Cedar Wood, light, drums	lb.	.75	1.00
Citronella, Java, drums	lb.	—	—
Citronella, Ceylon, drums	lb.	1.30	1.70
Clove, U.S.P., cans	lb.	1.80	2.00
Eucalyptus, Austl., U.S.P., cans	lb.	1.05	1.30
Fennel, sweet, cans	lb.	3.60	—
Geranium, African, cans	lb.	30.00	Nom.
Bourbon, cans	lb.	24.00	—
Turkish (Palmarosa)	lb.	5.25	5.50
Hemlock, cans	lb.	1.20	1.25
Lavender, 30-32% ester, cans	lb.	—	—
Spike, Spanish, cans	lb.	4.25	4.35
Lemon, Ital., U.S.P.	lb.	—	Nom.
Cal.	lb.	3.00	—
Lemongrass, native, cans	lb.	3.00	3.50
Linaloe, Mex., cases	lb.	4.25	—
Nutmeg, U.S.P., cans	lb.	4.75	6.00
Orange, Sweet, W. Ind., cans	lb.	6.00	6.25
Italian cop	lb.	8.00	Nom.
Distilled	lb.	1.70	—
California, expressed	lb.	2.65	—
Origanum, cans, tech	lb.	2.75	2.90
Patchouli	lb.	8.00	8.50
Pennyroyal, dom.	lb.	—	—
Imported	lb.	3.15	3.25
Peppermint, nat., cans	lb.	5.50	5.75
Redis., U.S.P., cans	lb.	6.00	6.25
Petitgrain, S. A., cans	lb.	1.95	2.20
Pine Needle, Siberian	lb.	3.00	3.25
Rosemary, Spanish, cans	lb.	2.25	2.30
drums	lb.	2.10	2.15
Sandalwood, dom., dist., U.S.P.	lb.	6.50	7.00
Sassafras, U.S.P.	lb.	2.00	2.20
Artificial, drums	lb.	2.00	—
Spearmint, U.S.P.	lb.	—	3.25
Thyme, red, N. F.	lb.	3.25	3.50
White, N. F.	lb.	3.50	3.75
Vetiver, Java	lb.	42.00	50.00
Ylang Ylang, Bourbon	lb.	—	—

**Aromatic Chemicals**

Acetophenone, C. P.	lb.	\$1.55	\$1.60
Amyl Cinnamic Aldehyde	lb.	—	—
Anethol	lb.	2.25	2.40
Benzaldehyde, tech.	lb.	.45	.55
N. F. VI	lb.	.85	2.75
Benzyl, Acetate	lb.	.59	Nom.
Alcohol	lb.	.63	.75
Citral	lb.	5.50	7.00
Citronellal	lb.	2.75	3.25
Citronellol	lb.	7.00	7.25
Citronellyl Acetate	lb.	—	—
Coumarin	lb.	2.75	3.25
Diphenyl oxide	lb.	.43	.50
Eucalyptol, U.S.P.	lb.	2.25	2.65
Eugenol, U.S.P.	lb.	2.75	2.80
Geraniol, Soap	lb.	1.10	1.50
Other grades	lb.	1.50	3.50
Geranyl Acetate	lb.	—	—
Heliotropin	lb.	5.25	Nom.
Hydroxycitronellal	lb.	7.25	8.75
Indol, C. P.	lb.	28.00	30.00
Ionone	lb.	2.75	3.95
Isoborneol	lb.	.81	.90
Iso-bornyl acetate	lb.	.80	.95
Iso-Eugenol	lb.	—	—
Linolool	lb.	6.75	7.00
Linalyl Acetate	lb.	5.50	7.25
Menthol, natural	lb.	—	13.50
Synthetic, U.S.P.	lb.	13.25	—
Methyl Acetophenone	lb.	—	—
Anthranilate	lb.	2.20	2.35
Paracresol	lb.	—	—
Salicylate, U.S.P.	lb.	.35	.40
Musk Ambrette	lb.	4.00	4.45
Ketone	lb.	4.15	4.60
Xylol	lb.	1.40	1.80
Phenylacetaldehyde	lb.	5.00	6.00
Phenylacetic Acid	lb.	1.85	1.90
Phenylethyl Alcohol	lb.	2.10	2.50
Rhodinol	lb.	—	—
Safrol	lb.	2.25	2.45
Terpineol, C.P., drs.	lb.	.40	—
Cans	lb.	.43	—
Terpinyl Acetate, 25 lb. cans	lb.	.87	—
Thymol, U.S.P.	lb.	3.00	Nom.
Vanillin, U.S.P.	lb.	2.35	2.75
Yara Yara	lb.	1.80	1.85

**Insecticide Materials**

Insect Powder, bbls.	lb.	.29	.30
Pyrethrum Extract			
20 to 1	gal.	5.90	6.00
30 to 1	gal.	8.85	9.00
Derris, powder—4%	lb.	.31	—
Derris, powder—5%	lb.	.35	—
Cube, powder—4%	lb.	.31	—
Cube, powder—5%	lb.	.35	—
Squill, red, dried	lb.	.85	1.00

**Waxes**

Bees, white	lb.	.61	—
African, bgs.	lb.	.49	—
Refined, yel.	lb.	.59	.60
Candelilla, bgs.	lb.	.38	—
Carnauba, No. 1, yellow	lb.	.88	.89
No. 2, N. C.	lb.	.84	.85
No. 3, Chalky	lb.	.77	.78
Ceresin, yellow	lb.	.13 1/2	.18
Montan Wax, bags	lb.	.45	.46
Paraffin, ref., 125-130	lb.	.0520	.0560

# MAKE the KREIS TEST



Did you know that NUCAR Active Carbon treatment of an oil or fat which has developed a slightly positive reaction to the Kreis test makes that oil or fat show a negative reaction?

Other adsorbents will not do this; in fact, in many cases, they will develop a positive Kreis test in an oil which before treatment showed a negative test.\*

\*See Oil and Soap Magazine 14:3-5 (1937)  
Harris, J. P.—Welch, W. A.

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# PRODUCTION

## SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, Oil & Fat Industries.

### Dry Cleaning Waterproof Fabrics

**A** METHOD for treating Army clothing with a water repellent in a dry-cleaning solvent has become of first importance, since the Army requires that water-repellent garments be retreated after dry-cleaning to restore their original wetting resistance. Many water-repellent fabrics which appear to be satisfactory when water is poured over them, are not nearly repellent enough to meet the 90 spray-test rating described in Bulletin T-125.

All water repellents should be used strictly in accordance with the directions of the manufacturer. These usually indicate that a solution of one part water repellent and 5 parts of Stoddard solvent should be used for the treating bath, ordinarily heated to about 90° F. Either the container in which the garments are to be treated, or a separate tank, should be equipped with a steam coil for heating the solvent. The water repellents will cause excessive pressure if they are run into a pressure filter. If a washer is used for treating, facilities must be available to pump the treating solution back into a storage tank after it has been used. The treating solution can be used over and over.

A higher degree of repellency can be obtained if the fabrics are dry when they are immersed in the treating bath than if they are wet with solvent. The garments should be immersed in the treating bath for 3-4 minutes, pre-

ferably with some slight agitation so that they become thoroughly saturated with the repellent solution.

The garments are then extracted, the degree of extraction being a very important factor. The reason is that the amount of repellent left in the garments depends on the amount of solvent left in them after extraction. This is a hard factor to control in a commercial plant, but if the garments are given what is commonly known as a light extraction, the result should be satisfactory. In most cases if the extractor is just allowed to reach maximum speed and then shut off, the conditions will be about right. With such extraction, cotton fabric will usually retain 20-25 pounds of solvent per 100 pounds of goods, and wool about 11-12 pounds of solvent per 100 pounds of goods. This is a desirable result, since the wool lining of field jackets is preferably less water-repellent than the outside cotton.

Laboratory tests show that when the extraction is not efficient, while there is very little increase in drying time, there is an increase in fire hazard during tumbling. It would be very hazardous, for example, to take garments directly from a drain board and tumble them, since an inflammable mixture of vapors in the tumbler would result. When the tumbler flue is clogged with lint, this will slow down the air flow and so increase the fire hazard. With light extraction it

is therefore important to make sure that the tumbler flues are clean.

On an average there will probably be about 3 pounds of water-repellent material left in both cotton and wool Army field jackets, per 100 pounds of garments. If the garments have been allowed to drain somewhat before being placed in the extractor, there will be about 85 pounds of solution removed during extraction. This should be returned to the original solution in order to conserve the water repellent as far as possible. Additional water repellent will have to be added to the solution occasionally, although it can be used repeatedly before becoming exhausted.

The amount of total water repellent consumed will probably be slightly more than 3 pounds per 100 pounds of garments because of some spillage. Most field jackets weigh about 2 pounds, which gives a basis for calculating amounts. The extra drying operation will increase the solvent consumption about 2 gallons per 100 pounds cleaned. After extraction the garments should be tumbled in the usual manner and then pressed. The pressing operation will increase the water repellency to some extent.

The degree of repellency which can be obtained depends on a number of factors: 1. The construction of the fabric,—whether closely or loosely woven. Cotton poplin is well adapted to the treatment. 2. The condition of

the fabric,—old worn fabric does not waterproof as well as new. 3. The type of fiber. Wool is more difficult to treat than cotton, but outer surfaces of Army garments given the treatment are usually cotton. *Textile Colorist* 64, 389-90 (1942).

#### Soap Solubility Test

Soap makers ordinarily need only comparative tests for soap solubility, so that practical results by some simple method are useful. In such tests, the amount of soap and of its surface exposed to the water must always be the same, with the temperature and other conditions kept constant, as in the following simple procedure.

Attach to the stem of a glass funnel a narrow glass tube 6-12 inches long, by means of rubber tubing which may be closed by a screw pinchcock. Put water in the funnel and adjust the rate of flow with the pinchcock to about 1 drop a second. Cut the soap samples to a definite shape such as a one-inch cube. Place this on a wire disk in the bottom of the funnel. Pour in a fixed volume of distilled water, say 100 cc. at the temperature desired, and catch in a beaker below. When the water has all flowed through, titrate free and combined alkali with 0.1 Normal acid to a methyl orange end-point. This can be calculated to soap content.

A cylindrical sample can be used if preferred, cut out with a cork borer and placed in a cylinder instead of a funnel. The point to be stressed is that the method adopted should be adhered to strictly with the various samples. The results being only relative, the general technique can be changed to suit the individual worker. *Soap, Perfumery & Cosmetics* 15, 333-4 (1942).

#### Wool Scouring

Dirt, suint and grease are effectively removed from wool by treatment with an aqueous aliphatic sulfate detergent bath at 140-150° F. and a pH of 4-6. B. W. Rowland and D. Frommuller, to The Institute of Paper Chemistry. Canadian Patent No. 406,980.

#### Gallic Acid Antioxidant

Animal fats can be stabilized by di- and poly-phenolic inhibitors, vegetable oils by acid-type inhibitors such as tartaric, phosphoric and other acids. These acids reinforce the action of inhibitols which occur naturally in vegetable oils or which may be added to animal fats. A study of the anti-oxygenic action of the polyphenols on both kinds of fats showed that gallic acid and ethyl gallate are effective stabilizers in both, and enhance the antioxygenic activity of inhibitols. They demonstrate the properties of both phenolic and acid inhibitors. Calvin Golumbic and H. A. Mattill. *Oil & Soap* 19, 144-5 (1942).

#### Water Hardness

Magnesium in the presence of ammonium chloride at pH 11.7-12 will not react with a standard soap solution. Calcium in water can therefore be determined in the presence of magnesium by direct titration with Clark's standard soap solution, with the addition of ammonium chloride and pH adjustment. Ions common to industrial waters do not interfere. The accuracy and rapidity of this method are equal to those of the usual soap titration for total hardness. The difference between a total-hardness determination by the usual Clark method and of calcium by the method described reveals the approximate hardness due to magnesium. J. W. Polsky and E. C. Feddern. *Ind. Eng. Chem., Anal. Ed.* 14, 644-6 (1942).

#### Incipient Rancidity

With a view to finding a cheap reagent for testing the peroxide content of fats, experiments were carried out with phenol, picric acid, quinine, pyrogallol and other compounds. Pyrogallol was found useful when used in 1 per cent ether solution, as follows: 2 cc. of the melted fat is cooled to 45°C., shaken with 1 cc. of hydrochloric acid of specific gravity 1.19, and treated with 8-10 drops of pyrogallol solution. If the fat is rancid, a raspberry-red ring develops after 1-8 minutes. When an acetone solution of pyrogallol was used, a yellow ring

developed after 10-15 minutes. This ring was difficult to detect if the fat was also colored yellow. Ch. S. Goreglyad. *Cbem. Zentr.* 1940, I, 3722; through Chem. Abs.

#### Dry-cleaning Process

A process of dry cleaning involves subjecting fabrics in a washer to the action of a solvent solution containing a detergent. The detergent is removed from the solution by filtration. A sulfated fatty alcohol is introduced into the filtered circulating solvent when the latter is in the form of a thin fan-shaped sheet at the washer inlet. The release of sulfated fatty alcohol to the solvent solution is in the ratio of one-half pint to every 25 gallons of solvent solution. In this way the fatty alcohol sulfate is broken up into fine particles by agitation of the solvent solution. The solvent solution with the suspended sulfated fatty alcohol is returned to the washer for further treatment of the fabrics. Dennis P. Allison. U. S. Patent No. 2,276,681.

#### Indian Seed Oil

The powdered seeds of *Buchanania latifolia* were extracted with light naphtha to yield 50 per cent of a pale yellow oil. Another sample extracted with benzene yielded 48 per cent of an oil of deeper color. The oil had an acid number of 32.7, saponification number of 193.2 and iodine number of 63.4 for the combined samples. N. N. Godbole, B. G. Gunde and P. D. Srivastava. *J. Indian Chem. Soc.* 18, 557-62.

#### Oil Rancidity Test

The method of measuring the antioxidative properties of fats and oils by accelerating the development of rancidity by aeration, can be greatly speeded up by use of a temperature of 110°C. instead of the old 97.7°C. The number of hours obtained at 110° can be multiplied by 2.5 to give the number of hours which would have resulted at 97.7°, so that results by the modified, more rapid method can be readily correlated with those obtained by the older method. V. C. Mehlenbacher. *Oil & Soap* 19, 137-9 (1942).

# Steel Drum Order

Complete text of Limitation Order L-197, eliminating steel drums as packaging material for numerous products, follows:

## STEEL SHIPPING DRUMS LIMITATION ORDER L-197

The fulfillment of requirements for the defense of the United States has created a shortage in the supply of steel shipping drums, and of certain metals and materials used in the production of such drums, for defense, for private account and for export; and the following order is deemed necessary and appropriate in the public interest and to promote the national defense.

§ 3061.1 Limitation Order L-197—(a) Definitions. For the purposes of this order,

(1) "Person" means any individual, partnership, association, business trust, corporation, governmental corporation or agency, or any organized group of persons whether incorporated or not.

(2) "Drum" means any single walled, cylindrical or bilged container with a capacity of 110 gallons or less (including but not limited to buckets, kits and pails) constructed wholly of steel. The term shall not be deemed to refer to cans or high and low pressure gas steel cylinders, or to any container not susceptible of commercial use in the transportation and storage of commodities.

(3) "Sale" shall mean any transfer of title of a drum or drums, with or without consideration, and shall include the transfer of possession of any such drums or drums, pursuant to a lease or rental arrangement.

(4) "Purchase" shall mean the receipt of any transfer described in subparagraph (3) of this paragraph (a).

(b) Restrictions on use. (1) No persons shall use any drum, new or used, for packing any product which he had not packed in drums prior to the date of issuance of this order.

(2) On and after 60 days after the date of issuance of this order, no person shall pack any of the following products in a drum or drums, new or used:

Acid Succinic.  
Alcohol, specially denatured (except the following formulas: No. 13A, No. 19, No. 20, No. 32 and No. 42).  
Aluminum sulphate.  
Ammonium bicarbonate.  
Ammonium chloride.  
Amyl acetate.  
Amyl alcohol (from whatever source derived).  
Amyl phthalate.  
Arsenic acid, solid.  
Arsenic trioxide.  
Arsenical mixtures.  
Asphalt (having maximum penetration of 95 at 75 degrees F.) (ASTM).  
Asphalt roof coatings or roof cements.  
Balsam copaiba.  
Bath salts.  
Borax.  
Bordeaux mixture.  
Boric acid.  
Bottle washing compounds.  
Butanol.  
Butyl acetate.

Butyl oxalate.  
Butyl phthalate.  
Calcimine.  
Calcium arsenate.  
Calcium carbonate.  
Calcium chloride.  
Calcium hydroxide.  
Calcium oxide.  
Casein paints, dry.  
Caulking compounds.  
Cements, dry, Portland, shoe nonflammable, waterproofing, tar base.  
Cement paint, dry.  
Charcoal.  
Chloride of lime.  
Citric acid.  
Cleaning compounds, dry.  
Colors, inorganic, dry.  
Colors, organic, dry.  
Compounds, solid and semi-solid, with a melting point of 65 degrees F. or above, used in cooking, including mixtures of lard and hydrogenated oils, but not limited to these mixtures.  
Copper oxide.  
Copper sulphate, basic.  
Copper sulphate, monohydrated.  
Dairy products.  
Di ammonium phosphate.  
Di calcium phosphate.  
Di sodium phosphate.  
Dyestuffs, dry.  
Ethyl acetate.  
Ethyl carbonate—all grades.  
Ethyl oxalate.  
Ethyl phthalate.  
Fatty acids.  
Flour.  
Food products, cold pack and frozen.  
Fruits—brine.  
Fruits and peels, glaze.  
Gelatine.  
Glue.  
Greases, animal and vegetable.  
Greases, petroleum, solid and semi-solid (greases with ASTM penetration of 300 and less).  
Hexamethylenetetramine.  
Hydrogenated oils with melting point of 65 degrees F. or above, including but not limited to shortening.  
Indigo paste.  
Jelly, jam and preserves.  
Kraut.  
Lanolin and wool grease.  
Lard.  
Laundry alkalies.  
Lead arsenate.  
Lime.  
Lime sulphur, dry.  
Linseed oil meal.  
Lithopone.  
Magnesium oxide.  
Marmalade.  
Meats.  
Metal degreasing alkalies.  
Modified sodas.  
Molasses.  
Mono ammonium phosphate.  
Mono calcium phosphate.  
Mono sodium phosphate.  
Moulding powder, except those for dielectric or insulating purposes.  
Oil, crude.  
Oils, steam cylinder, both compounded and un compounded.  
Olives.  
Paints, dry powder, including but not limited to those bound with glue, soya protein, casein and cement.

Paints, paste, water type (the vehicle of this type of product shall contain at least 5 per cent water).

Paradichlorobenzene.  
Paraffin wax.  
Paste cutting compounds.  
Paste drawing compounds.  
Paste grinding compounds.  
Paste rust proofing compounds.  
Paste, wall paper.  
Patching plaster.  
Pectin.  
Petrolatum.  
Pickles.  
Pine tar, solid.  
Pitch, roofing.  
Potassium bicarbonate.  
Potassium carbonate.  
Potassium chlorate.  
Putty.  
Resins, solid, rough-crushed and broken synthetic.  
Scouring cakes and powder.  
Shellac.  
Silicate of soda, dry, ortho silicate, meta silicate, sesqui, or mixtures thereof.  
Soap and detergents, dry.  
Soda ash.  
Sodium acid pyro phosphate.  
Sodium arsenate.  
Sodium bicarbonate.  
Sodium chlorate.  
Sodium chloride.  
Sodium hexameta phosphate.  
Sodium hydrosulphite.  
Sodium metaborate.  
Sodium nitrate.  
Sodium sesquicarbonate.  
Sodium tetra pyro phosphate.  
Starches and adhesives, dry.  
Sweeping compounds.  
Syrup, mixed and unmixed (except chemical syrups and corn syrup).  
Tallow.  
Tar.  
Tri calcium phosphate.  
Tri sodium phosphate.  
Vegetables—brine.  
Vinegar.  
Wax.  
Wood fillers.  
Zeolite.  
Zinc hydrosulfite.  
(c) Restrictions on sale, delivery and use. (1) No person shall manufacture or complete the manufacture of any drum which shall not have the letter X plainly and legibly embossed on the bottom plate thereof.  
(2) No person shall sell any drum, new or used, or deliver such drum pursuant to a sale thereof (regardless of when the manufacture thereof was completed) unless said drum shall be plainly and legibly marked on the bottom plate with a letter X.  
(3) No person shall remove, cover or conceal the markings referred to in subparagraphs (1) and (2) of this paragraph (c) unless same is necessary in the course of renovating, cleaning, painting or processing drums so marked, in which event the marking shall, within 48 hours, be replaced in as nearly as possible the original manner by the person effecting such renovation, cleaning, painting or processing.  
(4) No person shall pack any of the following products in a drum or drums, new or used, which was manufactured, purchased, or delivered on or after the 14th day of September, 1942.  
Asphalt, liquid.  
Boiler feed water treatment material, liquid.  
Corn syrup.



# The Modern Way to Sample

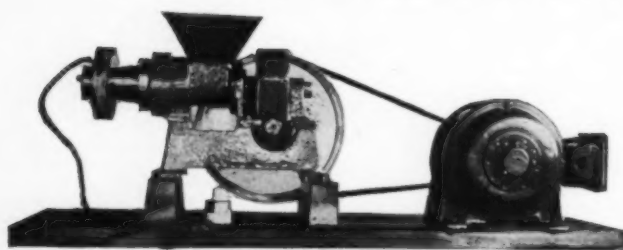


## Perfumes and Toilet Soaps

Tiny cakes of fragrant soap serve to sample the season's odors for many of the leading perfumers. Makers of toilet soaps also use them to sample their products.

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### HOUCHIN COMBINATION PLODDER



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Disinfectants, liquid.  
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 Floor sealers.  
 Floor wax.  
 Formaldehyde.  
 Fuse powder, black sporting powder,  
 "A" blasting powder, and all other  
 potassium nitrate black powder.  
 Inorganic salts, aqueous solutions.  
 Insecticides, liquid, including fly spray.  
 Lead oxides in paste.  
 Leather finishes, blackings, dressing,  
 adhesives.  
 Lime sulphur solution.  
 Live stock dip and spray.  
 Oils, animal, fish, marine animal, vege-  
 table (except for fish livers and vita-  
 min oils derived from fish or fish  
 livers).  
 Paints, oil and oleoresinous type, in-  
 cluding but not limited to white lead  
 in oil colors in oil, and oil stain.  
 Paris green.  
 Pine tar liquid.  
 Printing inks (except aniline or spirit  
 inks and roto-gravure inks).  
 Pyrethrum concentrate.  
 Rotenone.  
 Rust preventative with a flash point of  
 less than 100 degrees F.  
 Silicate of soda, liquid.  
 Shock absorber fluid.  
 Soaps and detergents, liquid.  
 Soaps, metallic.  
 Sodium lactate.  
 Starches and adhesives, liquid.  
 Turpentine.  
 Varnish and varnish stains, except  
 liquid water-soluble phenolic resins.  
 Vat dyes, paste.  
 Wood preservatives.

(5) Notwithstanding the provisions of paragraph (c) (4), any person who owns a drum on the date of issuance of this order, whether such drum is then in his possession or is thereafter returned to him by another person, may use such drum for packing any of the materials listed in said subparagraph, so long as he retains ownership of the drums; but the provisions of said subparagraph shall become applicable as soon as he sells such drum.

(6) Nothing in this paragraph (3) shall prevent the purchase of ends or other parts or accessories for drums; nor shall the affixing of such ends or other parts to such drums prohibit their use in accordance with subparagraph (5) of this paragraph (c).

(d) *General exceptions.* (1) Nothing in this order shall apply to the use of drums for storage purposes by any person having less than 5 drums in use for all purposes.

(2) The restrictions on use specified in paragraphs (b) (1) and (2) and (c) (4) of this order shall not apply to drums which are used for the sale and delivery of commodities to the Army or Navy of the United States, the Maritime Commission, the Panama Canal, the War Shipping Administration, or such other governmental agencies as the Director General for Operations may designate.

(e) *Relationship to General Preference Order M-45.* The provisions of this order shall govern to the extent that they may be inconsistent with any provisions of General Preference Order M-45 as amended.

(f) *Miscellaneous Provisions* — (1) *Applicability of Priorities Regulations.* This order and all transactions affected thereby are subject to all applicable

provisions of the Priorities Regulations of the War Production Board, as amended from time to time.

(2) *Records.* All persons affected by this order shall keep and preserve for not less than two years after the effective date of this order accurate and complete records concerning inventories, production and sales.

(3) *Audit and inspections.* All records required to be kept by this order shall, upon request, be submitted to audit and inspection by duly authorized representatives of the War Production Board.

(4) *Violations.* Any person who willfully violates any provision of this order, or who, in connection with this order, willfully conceals a material fact or furnishes false information to any department or agency of the United States is guilty of a crime, and upon conviction may be punished by fine or imprisonment. In addition, any such person may be prohibited from making or obtaining further deliveries of, or from processing or using, material under priority control and may be deprived of priorities assistance.

(5) *Appeals.* Any person affected by this order who considers that compli-

ance therewith would work an exceptional and unreasonable hardship upon him, or that compliance therewith would disrupt or impair any program of conversion from non-defense to defense work, or that compliance therewith would result in a degree of unemployment which would be unreasonably disproportionate compared with the amount of materials conserved, may apply for relief to the War Production Board by letter or other written communication, setting forth the pertinent facts and the reason or reasons why such person considers that he is entitled to relief. The Director General for Operations may thereupon take such action as he may deem appropriate.

(6) *Communications.* All reports required to be filed hereunder and all communications concerning this order shall, unless otherwise directed, be addressed to: War Production Board, Containers Branch, Washington, D. C. Ref: L-197.

Issued this 14th day of September, 1942.

AMORY HOUGHTON,  
 Director General for Operations.

## United States, Britain Agree on Fat Purchases

**E**XCLUSIVE buying by the United States of fats, oils and oil-seeds in certain regions of the world and by the United Kingdom in other areas is provided for in an agreement announced September 27, by the Combined Food Board. These two governments will do all the buying for the governments adhering to the agreement, the Board said. The plan was worked out after the Combined Food Board, in collaboration with the more vitally interested governments, had made a comprehensive survey of the supplies of fats and oils available to the United Nations in relation to essential wartime needs. Because of the urgency of the situation, the Board recommended a plan for the coordinated purchase and allocation of fats, oils and oil seeds. This recommendation has been accepted by the United States, the United Kingdom, Canada, Australia, New Zealand and South Africa and is now in effect.

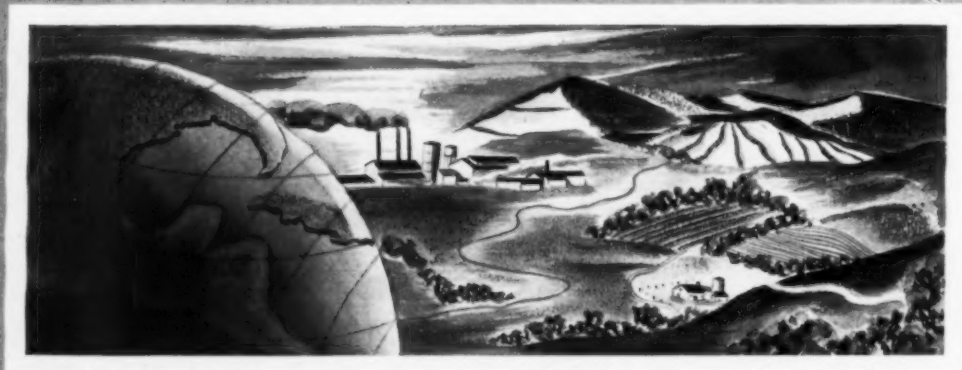
The agreement provides: (1) That the United States will be the exclusive purchaser, on behalf of the governments adhering to the agree-

ment, of the following: (a) All oil-seeds and oils and fats in the North and South American continents, including the Caribbean Islands, with the exception of animal fats in Argentina and Uruguay. (b) Copra in Tahiti and all Free French Pacific Islands. (c) All oilseeds, oils and fats in Portuguese Africa, Spanish Africa and Liberia.

(2) That the United Kingdom will be the exclusive purchaser of the following: (a) All animal fats in Argentina and Uruguay. (b) All oil-seeds, oils and fats in British Empire countries, with the exception of territory specified in 1 (a). (c) All oil-seeds, oils and fats in Free French Africa. (d) All oilseeds, oils and fats in the Belgian Congo. The supplies purchased by these two governments will be allocated among the United Nations according to recommendations made from time to time by the Board and accepted by the governments in question.

About one-third of all United States fats and oils consumption is for  
 (Turn to Page 70)

# Design for Living



**in a land of happiness:**

**"I**F we can take all that can be produced and divide it among the people who will then be alive to share it, **we shall be within reach of a very good standard of living for the first time in all history."**

*Mila Perkins*

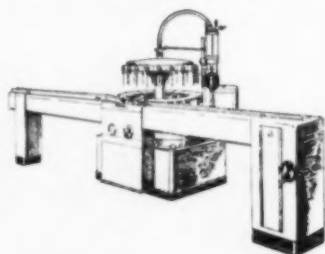
Executive director of the Board of Economic Welfare

Note that while there's an "IF," it is an "if" which a united, victorious nation **will be able to overcome**. Hence we are straining every nerve and employing all our resources in executing the war orders that have been given us, to help speed the day when

"we shall be within reach of a very good standard of living" in a land of happiness.  
This is the American Design for Living.

We make completely automatic, semi-automatic, hand-fed equipment to clean, fill, close and convey bottles, jars, tins and collapsible tubes.

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# PRODUCTS

## AND PROCESSES

### Non-efflorescing Soap

Bar soap contains a major proportion of a soap base, soda ash in an amount up to 2.5 per cent, sufficient to cause objectionable efflorescence in the absence of sodium phosphate, and an alkaline sodium phosphate in an amount up to 9 per cent. The phosphate gives desired hardness and substantially prevents efflorescence. Robert F. Heald, to Colgate-Palmolive-Peet Co. U. S. Patent No. 2,278,352.

### Black-liquor Soap

A mixture of the rosin acids and salts of the fatty acids of black-liquor soap are dissolved in an organic solvent in which the salts are soluble hot but not cold, and in which the rosin acids are soluble both hot and cold. The solution is dehydrated until it contains less than 1.5 per cent by volume of removable water. It is then cooled to precipitate the salts of the fatty acids, which are separated from the mother liquor. L. J. Christmann and Alfred G. Houpt, to Am. Cyanamid Corp. Canadian Patent No. 406,807.

### Oil Separation

Fat-containing material is subjected to treatment at atmospheric pressure and at an elevated temperature but not over 100°C., to an aqueous medium containing a material of a kind to lower the surface tension. The oil or fatty matter will separate and flow upward in a fine state of division. Victor Silberstein. British Patent No. 543,424.

### Hard-water Soaps

Soaps suitable for use with hard water are formed of a mixture of fatty acids comprising at least 10 per cent of polyethylenic fatty acids, not more than 20-25 per cent of saturated fatty acids having a minimum of 16 carbon atoms, and not more than a total of

30-40 per cent of saturated fatty acids. Also is present 1 part by weight of an alkali metal orthophosphate to 3.5-15 parts of the fatty acids present. The soap is finely divided. Instead of orthophosphate, polyphosphate may be used in a proportion of 1 part to 2-5 parts of fatty acids, or pyrophosphate in a proportion of 1 part to 2.2-8.2 parts of the fatty acids. Richard Thomas and Henry B. Oakley, to Lever Brothers Co. U. S. Patents No. 2,277,728, 2,277,729, 2,277,730.

### Bubble Product

An effervescent composition contains an aminoaryl sulfonamide,—citric, tartaric or similar acid,—and sodium bicarbonate. Jonas Kamlet and Lazar Rosenthal, to Effervescent Products Inc. Canadian Patent No. 406,696.

### Glycerine Substitutes

No one of the several possible substitutes for glycerine has properties which are all as satisfactory as those of glycerine. Compounds having physical and chemical properties similar to those of glycerine are glycols and their derivatives, erythritols and ethanolamines. Substances having only physical properties similar to those of glycerine are lactic acid compounds, sugar and starch preparations, and mixtures of magnesium chloride and calcium chloride with organic salts. F. Ohl. *Allgem. Oel. und Fett-Ztg.* 37, 69-71; through Chem. Abs.

### Vegetable-oil Soaps

In making soap from coconut oil, the soap can be salted out only by having at least 20 per cent of caustic soda in the lye, the neutralization of which would require large quantities of sulfuric acid. The use of sulfuric acid was avoided by using the spent lye for a second soap making and then neutralizing the excess

of soda with another oil such as cottonseed or kapok, which produced a soap capable of being salted out with sodium chloride. A lye with a good concentration of glycerine results; crude glycerine was readily obtained from it. R. R. L. Worsley. *East African Agr. Research Sta., Amani, Ann. Rept.* 13, 11-12; through Chem. Abs.

### Soapless Shampoo

Compounds suitable for use in soapless shampoos or other detergents are produced by heating an alkylolamine such as diethanolamine with an ester such as *alpha*-bromomyristate in the presence of a high-boiling solvent such as diethylene glycol. The solvent is distilled off after refluxing and the product treated with a solution of caustic potash in alcohol. The potassium halide formed and the alcohol are removed. Herbert H. Guest, to The J. B. Williams Co. U. S. Patent No. 2,277,015.

### Milk Soap

A stable jelly-like soap is produced from the reaction mixture of at least 80 per cent whole milk containing about 3.5 per cent of butter fat, an ethanolamine soap of a fatty acid, hydrogenated coconut oil, a lower glycol, and boric acid. The latter three ingredients should be present in an amount less than the ethanolamine soap. John E. McCormick. U. S. Patent No. 2,276,409.

### Tall Oil Treatment

A saponified tall oil of the type in which the unsaturated fatty part has been saturated by hydrogenation, is chilled in solution in alcohol to effect precipitation of fatty-acid soaps. Ernest Segessemann, to National Oil Products Co. U. S. Patent No. 2,276,517.

### Waste Straw Detergent

Lignin obtained from treating straw yields sodium lignosulfonate, useful as a cleansing agent. J. van Julsingha. *Chem. Weekblad* 37, 649-50; through Chem. Abs.



# PATENTS

Conducted by

Lancaster, Allwine &  
Rommel

Registered Attorneys

PATENT AND TRADE-MARK CAUSES

402 Bowen Building,  
Washington, D. C.

Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

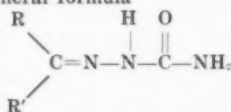
No. 2,290,870, Dry Cleaning Composition patented July 28, 1942 by Lawrence H. Flett, Hamburg, N. Y., assignor to Allied Chemical & Dye Corp. A dry cleaning composition comprising an emulsion of water in a volatile organic dry cleaning solvent, the water being in the internal phase, and a salt of a sulfonated fatty acid diester of a glycol, as a dry cleaning assistant and as an emulsifying agent for the water, the salt being selected from the group consisting of ammonium, alkali metal, alkaline earth metal, and organic ammonium salts.

No. 2,291,735, Antiseptic, patented August 4, 1942 by Marlin T. Leffler, Lake Bluff, Ill., assignor to Abbott Laboratories, North Chicago, Ill. As an antiseptic, colloidal silver bromide-acacia compositions containing a diluent selected from the class consisting of solid, water-soluble, non-hygroscopic polyhydric alcohols and non-reducing sugars.

No. 2,292,419, Shaving Preparation, patented August 11, 1942 by Herbert E. Wetherbee, Cleveland Heights, Ohio, assignor to Richard F. Grant, New York, and Benton H. Grant, Stamford, Conn. A shaving preparation comprised of a substantially homogeneous anhydrous mixture of base or primary shaving material selected from a group consisting of beeswax, paraffin wax, carnauba wax, Chinese insect wax, stearic acid, and palmitic acid, and of surface-active materials which is slightly soluble in

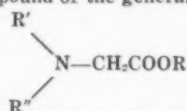
water and which acts as a distributing medium for the preparation by promoting a slow exhaustion of the latter and a rapid spreading thereof as exhausted in a film over the surface of water when the latter is contacted by the preparation.

No. 2,292,756, Insecticide, patented August 11, 1942 by Herbert L. J. Haller, Washington, D. C., assignor to Henry A. Wallace, as Secretary of Agriculture of the United States of America, and his successors in office. An insecticide containing as its essential active ingredient a compound of the general formula



where R and R' are each an alkyl radical of the general formula  $\text{C}_n\text{H}_{2n+1}$ .

No. 2,293,034, Pest Control Composition, patented August 18, 1942 by William Moore, Stamford, Conn., assignor to American Cyanamid Co., New York. A pest-control composition containing a toxic amount of a compound of the general formula:



wherein R is a member of the group consisting of aryl, aralkyl, alkyl and alkoxyalkyl radicals, R' is a member of the group consisting of  $-\text{CH}_2\text{COOR}$ , alkyl, aryl, aralkyl, alkoxyalkyl, cycloaliphatic and heterocyclic radicals, and R'' is a member of the group consisting of  $-\text{CH}_2\text{COOR}$ , hydrogen, alkyl, aryl, aralkyl, alkoxyalkyl, cycloaliphatic and heterocyclic radicals.

No. 2,293,255, Insect Repellent, patented August 18, 1942 by Philip Granett, New York, assignor to National Carbon Co., New York. An insect repellent composition which contains a substantial proportion of an essential repellent ingredient of the group consisting of ethylene glycol dibenzyl ether, diethylene glycol butyl benzyl ether and diethylene glycol monobutyl ether.

No. 2,293,256, Insect Repellents, patented August 18, 1942 by Philip Granett, New York, assignor to National Carbon Co., New York. An insect repellent composition which con-

tains a substantial proportion of an essential repellent ingredient of the group consisting of ethylene glycol monophenyl ether, ethylene glycol monoeugenyl ether, diethylene glycol monobenzyl ether and diethylene glycol monophenyl ether.

No. 2,294,075, Detergent Composition, patented August 25, 1942 by Robert B. Colgate, Huntington, N. Y., and Emil E. Dreger, Summit, N. J., assignors to Colgate-Palmolive-Peet Co., Jersey City, N. J. A detergent composition for cleaning fabrics which dissolves in hard water without substantial formation of curds comprising about 40 to 60 per cent by weight of a water-soluble soap, about 10 to 40 per cent by weight of a water-soluble salt of a phosphoric acid selected from the group consisting of tetraphosphoric, pyrophosphoric, and metaphosphoric acids, and about 40 to 50 per cent by weight of a water-soluble sulphonate obtained by extracting a mineral oil with a selective solvent for the unsaturated constituents, sulphonating the resulting mineral oil extract while it is dissolved in liquid sulphur dioxide and neutralizing the sulphonation product.

No. 2,294,238, Insecticidal Composition, patented August 25, 1942 by Donald F. Murphy, Langhorne, Pa., assignor to Rohm & Haas Co., Philadelphia. A spray for application to living plants which contains water, an emulsifying agent, less than about 2 per cent of a spray oil, and less than 0.25 per cent of an organic thiocyanate selected from the group consisting of thiocyanato substituted ethyl ethers and thiocyanato ethyl esters of higher fatty acids.

## W.P.B. Changes Chem. Branch

In important changes of executive personnel and organization of the Chemicals Branch of the W.P.B., Hugh D. Hughes has become the new chief of the aromatic and intermediates section. Mr. Hughes, who came to the W.P.B. from Carbide & Chemicals Corp., New York, where he was assistant chemicals sales manager, takes the place of James Raynolds. Mr. Raynolds was made assistant chief of the Chemicals Branch. Dr. H. S. Coith, who is replaced by Mr. Raynolds, has returned to his former post with Procter & Gamble Co.

New, too, is a transportation and packaging section established within the frame work of the Chemicals Branch. Donald C. Knapp is chief.



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# U.S.I. CHEMICAL NEWS

October



A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries



1942

## Improves Qualities Of Yellow Pigments By Heat Treatment

Transparency and Tinctorial  
Strength Materially Increased

WOODSTOWN, N. J.—Possibility that the well-known high transparency and excellent tinctorial strength of the yellow pigments, formed by coupling the acetoacetylides with other compounds, can be still further increased is suggested by a recent patent granted to an inventor here.

Describing the results obtained with a yellow pigment produced by coupling tetrazotized 3, 3'-dichlorbenzidine with acetoacetylides, the inventor claims that the transparency was greatly increased by a suitable heat treatment of the precipitated color before isolating it. The process is expected to increase the utility of this yellow pigment for printing inks.

Acetoacetylides is produced by U.S.I.

## Describes Novel Shampoo For Use Without Water

BROOKLYN, N. Y.—A soapless hair shampoo which forms a cleansing and dirt-loosening foam or froth, without the addition of water at the time of using, can be prepared by dissolving a frothing agent in an aqueous-ethanol mixture.

This claim is made by an inventor here, who has obtained a patent on the shampoo. The preparation, according to the inventor, carries away dirt, oil, and foreign matter largely by the flotation action of the froth. For this reason, it is desirable to use a relatively high concentration of the frothing agent. This is made possible, the inventor points out, by the use of the aqueous-ethanol mixture, which has higher solvent power for the frothing agent than water alone. A preferred composition also includes buffer salts to act as mineralizers and pH regulators for the froth.

A bulletin recently issued by U.S.I. outlines procedures for separating and analyzing the volatile constituents of lacquers. Copies are available free of charge—ask for Bulletin SA.

## Suggest New Formula For Paint and Varnish Remover

WASHINGTON, D. C.—An efficient paint and varnish remover, which has shown satisfactory results in tests, can be formulated without the aid of benzol, it has been reported here.

The product is said to be a mixture of 25% by-product chlorinated hydrocarbon, 50% acetone, and 25% denatured alcohol. A small amount of wax (2 to 3%) is added to the mixture. The by-product chlorinated hydrocarbon used is described as a mixture of the chlorides of methane, propane, and ethane.

This paint remover is said to have been successfully tested on floor finishes two years old, exterior paints, and synthetic enamel films one year old.

## New Method Devised to Study Drying Rates of Lacquer Films

Procedure Simulates Actual Drying Conditions of Protective  
Coatings, Permits Accurate Determinations in a Short Time

A simple, rapid technique for determining the drying rates of thin films by means of an easily constructed apparatus was recently devised by George Rieger and C. S. Grove, Jr., at the University of Minnesota. The procedure, which may be expected to give new light on the behavior of film-forming solutions, such

as are used in protective coatings, has the special advantage of simulating the drying conditions encountered in practical applications, it is reported. Hence the data which can be obtained should be particularly valuable to lacquer formulators.

Fundamentally, the procedure consists in observing the changes in weight of a thin film cast on a glass slide used as a base or tare. The film caster is made from a length of brass tubing. One end of the tubing is machined, and a casting channel is milled out. (See Fig. 1 at left.) A few milliliters of the solution to be tested are introduced inside the caster, which is then moved over the surface of the tare to cast the film. Excess solution is thrown clear of the tare and may be caught in a suitable container.

### Test Apparatus

Since the weight of the tare is large compared to the weight of the film, determination of the rate of drying requires an extremely sensitive weighing device. For this purpose, Mr. Rieger and Dr. Grove have employed a Christian Becker air-damped analytical balance, which is provided with a scale attached to a pointer, and ordinarily read by means of a microscope. To simplify the taking of readings, lenses and a source of light are so arranged that the pointer scale can be projected on a screen. (See Fig. 2 below.)

### Recording of Values

With this apparatus, the weight of the tare and film is determined and recorded at equally spaced time intervals. At the conclusion of the drying run, the tare and film are removed and placed in a drying oven, then removed from the oven and allowed to stand overnight. This weight is then recorded as the "dry weight."

A series of simple calculations based on these readings gives the necessary data for

(Continued on next page)

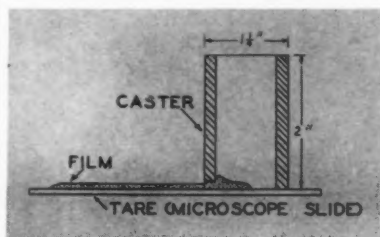


Fig. 1. Film is cast on a glass slide by means of a brass tube, carefully machined and channel-cut at one end.

## Alcohols Identified by Conversion to Xanthates

WASHINGTON, D. C.—Alcohols, glycols, and glycol ethers can frequently be identified by a simple procedure involving their conversion to the corresponding potassium xanthates. The xanthates, it is pointed out, have definite melting points and easily determined iodine equivalents, thus making identification a fairly simple matter.

The procedure is described as consisting in treating an aqueous solution of the alcohol to be identified with potassium hydroxide, alcohol-free acetone, and alcohol-free carbon disulfide at a temperature of about 40°. In the case of the monohydroxy alcohols, the xanthates thus obtained are dissolved in acetone, precipitated with ether, redissolved in alcohol, and recrystallized by adding ether.

Melting point and iodine equivalent of the xanthate are then determined. The alcohol undergoing test is identified by comparing these values with known data.

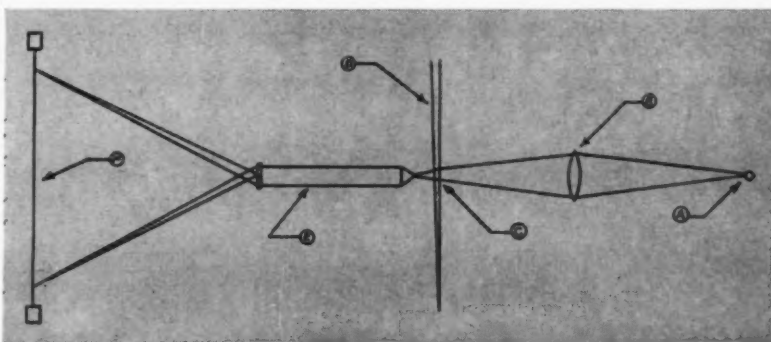


Fig. 2. Optical system for facilitating taking of weight readings during test runs. A, light source; B, condenser lens; C, pointer scale; D, pointer; E, balance lens; F, projection screen.



October



# U.S.I. CHEMICAL NEWS



1942

## Drying Rates of Films Studied by New Method

(Continued from previous page)

constructing graphs of the drying rate. For any drying time  $T$ , the total weight  $W$  of tare and film is known. Subtracting from  $W$  the "dry weight" of the tare and film gives the weight of the volatiles  $V$  present in the film at time  $T$ .  $F$ , the grams of solvent per gram of dry film is then obtained by dividing  $V$  by the weight of the "dry" film. The area of the "dry" film in square inches  $A$  is determined by a planimeter.

### Drying Rate Calculations

The drying rate  $R$  is expressed as milligrams of volatiles per square inch of "dry" film per minute. For practical purposes, if readings of  $W$  are taken at sufficiently short intervals of  $T$ , the drying rates may be calculated directly from the original data as follows:

$$R_2 = \frac{1000 (W_3 - W_1)}{A (T_2 - T_1)} = \frac{\text{mg.}}{\text{sq. in.} \cdot \text{min.}} \text{ at } T_2 \text{ and } F_2,$$

where  $T_2$  is midway between  $T_1$  and  $T_3$ .

### Reproducibility of Results

As a check on the reproducibility of results obtained by this method, Mr. Rieger and Dr. Grove made a number of duplicate runs on a 5% solution of 20 second nitrocellulose in ethyl acetate and plotted the  $R$  vs.  $F$  values. The results are shown in Fig. 3 in the adjoining column. It will be noted that the deviations of the points from the "best" curve drawn through them are small.

The method is described as particularly useful in studying the behavior of thin films of very rapidly drying solutions, while in the case of more slowly drying solutions it offers an opportunity to conduct a number of drying runs in the time formerly required for one. While most of the investigations already conducted with this apparatus have dealt with nitrocellulose solutions, the method is regarded as applicable to the study of the drying rates of any type of thin film, including those in which drying takes place by a combination of evaporation and chemical action. The simplicity and rapidity of the technique are expected to make it a valuable tool of research.

(U.S.I. CHEMICAL NEWS is indebted to Mr. Rieger, Dr. Grove, and the publishers of *Industrial and Engineering Chemistry* for permission to reproduce this material.)

## Urethan to be Included In U.S.P. XII as Aid to Quinine Salt Solubility

Urethan (ethyl carbamate) will be included among the drugs to be listed in the new pharmacopoeia, U.S.P. XII, which will become effective November 1, it has been announced.

Urethan will be used in preparing injections of quinine hydrochloride and urethan, to increase the solubility of the quinine salt and to make a neutral solution, which is employed as a sclerosing solution in varicose veins.

## Report Rapid Method for Sulfate Ion Determination

A rapid volumetric method, recently described, for the determination of sulfate ion, offers an interesting illustration of the application of ethanol as a non-solvent, in contrast to its more widespread use because of its excellent solvent powers.

The method involves the use of barium chloride and disodium hydrogen phosphate, with methyl red as an indicator. A concentration of at least 25% by volume of ethanol is said to be necessary to reduce the solubility of barium hydrogen phosphate sufficiently to give good results.

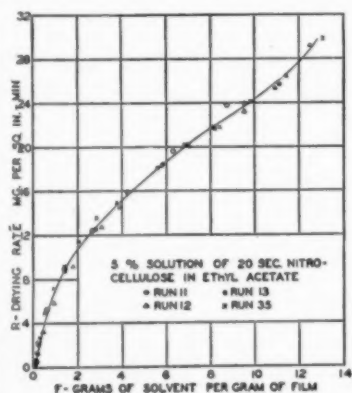


Fig. 3. Results of a group of test runs, undertaken to determine the reproducibility of results obtained by the method.

## TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

**Colorimetric determinations** of pH can now be carried out with less than 0.5 ml. of sample with the aid of a new test set, it is claimed. It is said that turbidity and color in sample do not interfere with determination. Standard range is from 5.2 to 8.6 pH, with accuracy of  $\pm 0.1$ . (No. 620)

U S I

**Oil of Canada Fir** is a new product described as having a fragrant, persistent odor of fir trees. Maker suggests its use in soaps, bath preparations, and similar products. Samples are said to be available. (No. 621)

U S I

**A flame arrester** for the protection of tanks containing volatile, flammable liquids is said to permit free passage of vapors, but to offer a positive stop against flame if the vapors become ignited. Arrester is described as being adaptable also to preventing the propagation of flame along a pipe line carrying explosive gases. (No. 622)

U S I

**Phosphorescent tape** is a new addition to the list of blackout products. Made in 1-inch width with an adhesive backing, it is suggested by the manufacturer for outlining of doors or obstructions, and for cutting into short lengths to make lettering. Activation may be by natural or artificial light. (No. 623)

U S I

**A water-white liquid** is said to be useful in removing paint, enamel, lacquer, or varnish from metallic or non-metallic surfaces. Sprayed on the surface, it is reported to exert a solvent and swelling action, permitting final removal by mechanical means. It is described as non-toxic and non-flammable. (No. 624)

U S I

**A new corrosion inhibitor** is described as a colloidal gel which can be applied by dip or spray to form a corrosion-resisting film in process operations. Maker says that it can also be used as an addition agent in paint. (No. 625)

U S I

**A chemically resistant paint** is said to be capable of withstanding attack by caustic liquors up to 70% concentration, and to be almost completely inert to vinegar and to glacial acetic acid. (No. 626)

U S I

**A traffic zoning paint** has been formulated especially for marking factory floors, according to the manufacturer. It is said to dry for traffic within 15 minutes, to show high resistance to all types of traffic, and to maintain excellent visibility over long periods of time. (No. 627)

U S I

**Two new bactericides** have been added to the group of such substances isolated from fungi. Both of the new bactericides are said to have displayed high activity against gram-negative bacteria. (No. 628)

U S I

**A photoelectric reflection meter** recently placed on the market is said to be adaptable to measuring the reflectance and color of solid surfaces, fabrics, pastes, powders, and opaque liquids. It is provided with a search unit placed on the surface to be measured, so that test specimen need not be inserted into instrument. (No. 629)

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Diethyl Oxalate

### PHTHALIC ESTERS

Diamyl Phthalate  
Dibutyl Phthalate  
Diethyl Phthalate

### OTHER ESTERS

Dialal  
Diethyl Carbonate  
Ethyl Chloroformate  
Ethyl Formate

### INTERMEDIATES

Acetoacetanilide  
Acetoacet-ortho-aniside  
Acetoacet-ortho-chloranilide  
Acetoacet-ortho-toluidide  
Acetoacet-para-chloranilide  
Ethyl Acetoacetate  
Ethyl Benzoylacetate  
Ethyl Sodium Oxalacetate

### ETHERS

Ethyl Ether  
Ethyl Ether Absolute—A.C.S.

### OTHER PRODUCTS

Acetone  
Collodions  
Curbay B-G  
Curbay Binders  
Curbay X (Powder)  
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Potash, Agricultural  
Urethan  
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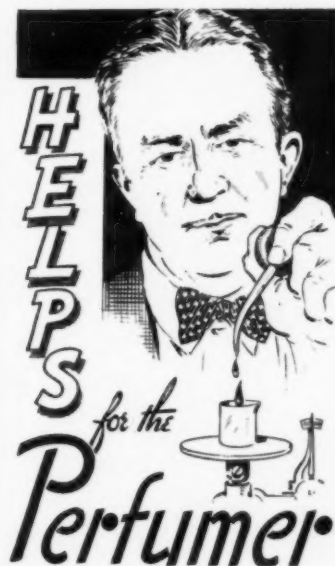


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AROMATICS

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# EQUIPMENT

## AND BULLETINS

**I**F YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

### 903—Hercules Resin Booklet

The possibility of employing "Staybelite" resin in the manufacture of soap is discussed in a new eight-page booklet just issued by the Naval Stores Department of the Hercules Powder Co., Wilmington, Del. According to the booklet, "Staybelite can be readily saponified and may be used in 'white' soaps, in amounts ranging from 5 to 15 per cent, without materially affecting the color." This hydrogenated rosin produced by Hercules from southern pine is a glass-clear, pale amber, non-hygroscopic solid with a softening point slightly below that of rosin. It has a saponification number of 167, and contains 9.0 per cent unsaponifiable matter. The booklet, which is available on request by writing to the company, contains a table of the physical and chemical properties of Staybelite and an analysis of a typical sample.

### 904—Booklet on Metal Cleaners

Applications of sodium metasilicate with synthetic wetting agents involving aluminum cleaning are reviewed in the September issue of "Silicate P's & Q's" put out by Philadelphia Quartz Co., Philadelphia. The discussion—timely because of the war caused scarcity of chlorinated solvents—presents the case for sodium metasilicate as a versatile cleaner both on its own and in combination with other materials. One formula, for difficult metal cleaning of light steel, uses a 1 per cent solution composed of 19 parts sodium metasilicate (Metso) and 1 part alkyl aryl sulfonate (Nacconol NR). The latter material reduces

surface tension and assists the Metso solution in the removal of grease film with only two seconds contact. Copies of "Silicate P's & Q's" are available on request.



### 905—Saran Tubing Sheet

Hodgman Rubber Co., Framingham, Mass., has just issued a catalog sheet describing plastic "Saran" Tubings and fittings for the replacement of strategic materials. This plastic tubing, which comes in sizes from  $\frac{1}{8}$  to  $\frac{3}{4}$  of an inch, is said to be chemically resistant and this is borne out in many instances by a table in the sheet. Various properties and reports of tests made on "Saran" tubing are also shown.

### 906—Pest Control Circulars

Missouri Agricultural Experiment Station, Columbia, Mo., has issued a series of 4-page circulars on insect pest control, the list being as follows: Circular 220—Bramble and Brush Fruit Insects, by W. W. Smith; Circ. 222—Preventing Wormy Apples, by L. Jenkins and L. Haseman; Circ. 224—Controlling Fleas, by R. E. Roselle and L. Haseman; Circ. 226—Controlling Garden Insects, by L. Haseman; Circ. 228—Control of Poul-

try Lice and Mites, by P. C. Stone; Circ. 229—Controlling Stored Grain Pests, by L. Haseman.

### 907—Dupont Fumigation Manual

E. I. du Pont de Nemours & Co. has a new 76-page "Fumigation Manual" designed as a reference book for pest control operators. Fumigation procedures and materials for use in homes, industrial plants, warehouses and other places are described in detail. A descriptive list of insects is included and information supplied on the effect of hydrocyanic acid gas on foods, fabrics, metals, etc., fumigation precautions, first aid and other pertinent data.

### 908—Insecticides for War Gardens.

A booklet entitled "Insecticides for Victory Gardens" has been issued by the Agricultural Experiment Station at South Dakota State College, Brookings, S. D. It is a 16-page practical summary of control of common garden insects prepared by Prof. N. P. Larson of the Entomological Department at N. D. State. Copies of the booklet may be obtained by writing direct to the college, mentioning Circular No. 40.

### Book on Strategic Materials

"Strategic Materials in Hemisphere Defense" is the title of a new book by M. S. Hessel, F. A. Hessel, and Walter J. Murphy. The book is in fact a statistical study of the present situation in rubber, the important war metals and chemicals, in drugs such as quinine, iodine, opium, in textiles, leather and industrial fibers. Fats, oils, gums, and petroleum are likewise treated. A small section of the book, which totals 235 pages, is given over to a summary of Latin America as a supplier and potential supplier of strategic materials. The book is published by Hasting House, Publishers, New York. Price \$2.50.

### Wrisley Ball Team Record

Allen B. Wrisley Co.'s baseball team won fifth place in the finals of the Clearing League, an organization of teams representing industrial plants in the Clearing Industrial District on Chicago's far southwest side.

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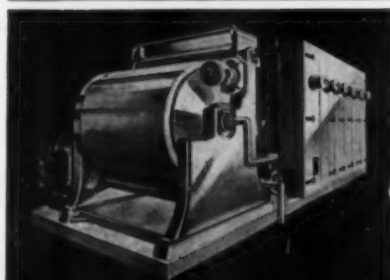
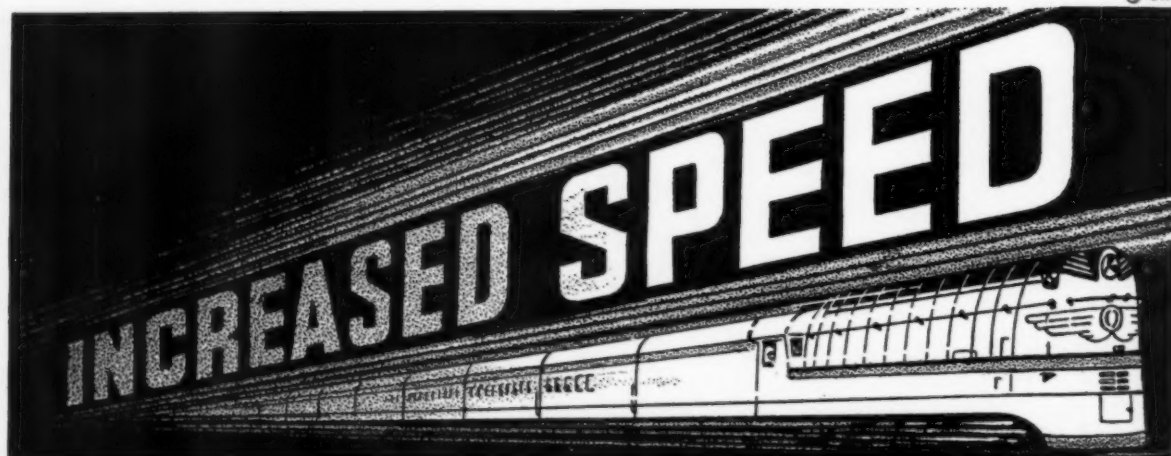
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Titanium Oxide .....	.06	.10
Calcium Oxide .....	.80	1.10
Magnesium Oxide ....	.36	.40
Soda .....	3.64	3.03
Potash .....	4.38	5.58
Sulfuric Anhydride ...	.03	.05
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## NEW PROCTOR *Flake Soap* SYSTEM



## Floor Maintenance

(From Page 29)

increase the "wetting" ability of water or to give certain detergent action.

Read the instructions issued by any of the floor covering manufacturers (regardless of the type of floor) and you will find them worded to eliminate the excessive use of water. In most cases, you find definite words of caution against different types of soaps or cleaners. For example, you must not use an oil base soap or a solvent type of cleaner on rubber. You must not use a cleaner with high alkali content on linoleum. You should not use an abrasive type cleaner on any valuable floor surface and even when you reach the sturdy long wearing asphalt tile, you again are cautioned against certain soaps and solvents. The one-time use of an incorrect cleaner will do damage to a floor surface equivalent to a full year of traffic abuse, and the adoption of an incorrect cleaner or cleaning method over a short period of weeks can reduce the possible life of the floor covering by years.

### Conserve Floors With Wax:

The maintenance of a thin protective film of wax on the wearing surface will not only reduce the abuse of traffic to a minimum, but that same film of wax acts as a buffer against the abuse of water, soap and cleaners. In reality cleaning merely removes the dirt from the top of the wax film. It is more or less similar to wiping the dirt off of the table tops that might be covered with a piece of glass. The ease of removing the dirt from the top surface of the protective wax film, allows you to use less cleaner or soap, less elbow grease, and less time. This all adds up to less abuse to the floor surface itself and a definite conservation of time, labor, materials.

Even in those cases where a floor has been abused by improper care or neglect, wax will in many cases correct the trouble and bring the surface back to a live, healthy and fine-looking condition. I remember a linoleum floor in the Small Animal Department of the University of Pennsylvania, where the long use of disin-

fectants, excess water, urine, etc., had resulted in a bad drying out of the floor covering. This linoleum was hard and brittle to the point that it had lost all of its resiliency. It was hard to walk upon. If slightly bent at a loose joint, it cracked off like so much dry putty. There seemed no answer but to lay a new floor. However, the rush of activities prevented this for the year in question. The University decided to maintain that area with a water emulsion wax and before the year was out, that linoleum was again in a good pliable condition. The wax had found its way down into the surface to replace the oxidized linseed oil binder that had been dissipated and had rejuvenated the linoleum.

I have seen this same thing happen to rubber. About twelve years ago I had an office in the Fox Building in Philadelphia. The rubber tile corridors of that building had gone bad and everything indicated that they should have been torn up and new rubber laid. The floor was full of "alligator" cracks and as hard as cement. The management adopted and persisted in maintenance with a water emulsion wax and those rubber corridors are still in service today and in what would appear to be a better condition than they were twelve years ago.

Wax not only "protects the surface," it actually rejuvenates the flooring by replacing those gums, resins and binders which are originally built into the floor to hold together the cork, wood flour, fiber, coloring pigment, clay, etc. Thus we should learn to look upon wax maintenance not only because it saves labor, but because it saves the floor.

**Economical Application of Floor Wax:** There are literally hundreds of brands of floor wax available on today's market, and naturally we can expect to find a great variation in the "floor performance" quality of this large assortment. This article, however, does not propose to help in a selection of brands. It is assumed that the user has been wise in selecting a good quality wax with good slip-resisting quality, high water

resistance and with a toughness of film that will assure long wear.

Today we find more buyers holding the "slip-resistance" quality important. Let us understand, then, that if the wax is truly slip-resistant that a good coating of it must be applied on the floor surface if the best "slip resistance" is to be secured. An original application of two and possibly three or four coats must be used if we are to obtain the full extent of slip resistance that is characteristic of any particular wax formula. Naturally, if the wax is itself non-slippery, then the more of it that we put on the surface the less slippery that surface should be. This contradicts the old thought of diluting wax or applying only a thin coating when one is having trouble with slip hazard, but remember that such thought developed in those days prior to floor wax manufacturers learning that they could actually reduce slip hazard in the wax formula.

To accomplish this original build-up of wax on the floor surface, one should apply numerous thin coats rather than undertake to apply one or two heavy coats, for like paint, wax is better if applied in a greater number of thin coatings. The general appearance will more than compensate for the extra time needed for a careful spreading of multiple thin coats. Saving in wax gallonage starts after the original complete application. Those who try to accomplish a saving before this operation will invariably be disappointed. First, if they try to save in initial cost per gallon, they must purchase an inferior product. Second, if they try to save by applying too thin a coat of wax, they will fail to secure the floor protection needed due to lack of "body," and will be forced to re-wax so often that the labor bill will overbalance any possible saving in gallonage.

One prominent building superintendent on the eastern seaboard states that the cost of floor maintenance with wax in the average office building can be divided 85 per cent to labor and 15 per cent to materials. It is therefore apparent that we must lay out a program which conserves chiefly labor,



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and while considering savings in material, must not over-emphasize the 15 per cent material and overlook the 85 per cent labor.

**Conserving Labor:** We are in a machine age. Industry has proven that a few dollars spent on the right kind of equipment will be saved many times over in labor cost. Those men who maintain floors should have the correct equipment and plenty of it. For example, no man should undertake to clean a large floor with one bucket of water because before he has cleaned a hundred square feet the water will be dirty and from that point on he will merely be distributing the dirt, not cleaning it off. The man should use two buckets, one of clean "cleaning solution" and one for dirty water. We all know that any residue of dirty cleaning material which dries back onto the floor will interfere with the working qualities of even the best waxes, thorough rinsing of the surface with clear water is important.

Thus the free use of clear water will help conserve the flooring by assuring a cleaner and more receptive surface upon which to apply the wax, —and less wax is needed on a clean surface than on a dirty one. Give workmen good tools with which to work and plenty of clean water, and we all find that they conserve their time as well as their consumption of both cleaning materials and wax.

**Polishing Machines:** I like to speak of these machines as dry cleaning equipment, for I have seen many cases where a floor appeared to call for a damp mopping followed by another application of wax, whereas in reality all that was needed was to run a stiff brush on the machine over the surface and knock off that "sticky type" dirt which was half ground into and adhered to the top surface of the wax. A polishing machine, therefore, becomes the means of saving many coats of wax during a year's period and it is certainly a great extra saving in labor for such a "dry cleaning" of the surface can be accomplished in one third the time of damp mopping and applying new wax.

**Conserving Wax:** Many users fail to point out to their workmen

that it is unnecessary, even unwise, to re-wax the entire surface of most floors. One of the best features of a floor wax is its ability to be applied only to the traffic lanes without showing overlapping streaks.

Make sure that workmen do not pile one coat of wax upon another in those areas that receive little or no wear. A little supervision here will save not only a large gallonage of wax and a large amount of labor insofar as the actual waxing is concerned, but it will save still further by putting off that day when because of a "build-up" of many coats of wax in unused floor areas, it will be necessary to "skin off" all of the old wax and start off with a new multiple-coat original application.

Maintenance coats of wax should be applied only in those areas where there is a showing of wear and this as a rule will mean but one-third or one-fourth of the entire area. Think of the time, labor and material that can be saved by a correct and careful adherence to such a plan. Then before passing this subject, think again of the difficulty that is usually attached to cleaning off of unnecessary "build-up" around the edges of the room, under desks and in other protected areas. The wax on these unused areas has not been broken down by traffic and the longer it remains on the floor the higher it builds up in water resistance so that in many instances it is really a problem to remove.

**Conserving Cleaner:** Many a bucket of so-called dirty cleaning solution is thrown away when it still has plenty of cleaning ability left in it. Use this dirty cleaner to the extent of its full cleaning capacity, but be sure you do not allow it to dry back onto the floor surface. A good procedure here is to use a squeegee and after cleaning one section of the floor with cleaning solution, squeegee it over to the next section and merely add that amount of new and clean "cleaning solution" which is necessary. Thus all of the cleaning material is used completely, and if, after squeegeeing an area, it is rinsed with clear water, a mighty good cleaning job results.

Any cleaner must be given time really to wet the full body of dirt before it can do its best cleaning work. A drop of water standing on a pile of dust can be rolled around on top of the dust for a few seconds before it "wets" the dust and thus acts as a cleaner. This same principle holds good in the cleaning of a floor or a wall. The cleaner must be allowed completely to wet the dirt before it can do its cleaning work. By using this suggestion, a better finished cleaning job with a weaker solution of cleaning material can be done. Let the cleaning material remain on the surface in a wet condition for four or five minutes before agitation with a brush or mop. Naturally when interested only in cleaning a little dirt off the top surface of the wax, it is only necessary to damp mop. In this case, use as little water as possible and allow the surface to remain wet for as short a time as possible.

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A new greaseless cream, which applied to a worker's hands, arms and under the nails, protects them from grime and from some irritating substances, has been announced by E. I. du Pont de Nemours & Co.

#### Agree on Fat Purchases

(From Page 59)

non-food uses, chiefly soap, glycerine for explosives, etc. The total production of oils and fats in the U. S. for the year beginning July 1, 1942, is estimated at 11.6 billion pounds, compared with 9.6 billion for the previous year. However, the war has reduced imports for the same period by about a billion pounds. Although there seems to be a net increase in the supply of fats and oils, without some restriction on consumption that amount would not be adequate for all the needs of the civilian and wartime economy.

Britain normally depends on imports, including whale oil, for about 95 per cent of its fats and oil supply. Her imports came mainly from the U. S., the Pacific area, India and South America. Shortages in the United Kingdom have made severe restrictions necessary there.

## Container Outlook

(From Page 22)

today to many manufacturers, but as far as could be determined, they were ideas (illustrated by hand-made samples) when last viewed,—and a manufacturer cannot ship 55 gallons of liquid soap today in an idea which may come to fruition a year hence.

Much publicity was recently given to a new type paper can with metal top and bottom,—the latter made incidentally from scrap metal. These cans were made on the regular production line for other cans and looked like the solution of many a manufacturer's can problem until the manufacturer stated that the announcement had been a trifle premature because the W.P.B. had put "thumbs down" on the use of the scrap metal for the ends. All-paper scouring powder cans, suitable as well for other dry products have been available for some years and will probably be forced to take up much of the demand for metal-end paper cans.

In the case of paper packaging materials generally, there is no apparent material shortage or outstanding difficulty right now. Paper is in ample supply. Any shortage is in manufacturing facilities for the finished containers. All other packaging problems date right back to the steel shortage and attempts to substitute steel with something else. Soap paper wrappers and boxes are still available to manufacturers. Cartons for flakes, chips and powders are as yet unrestricted. In fact the freeze order of O.P.A. on soap package size has just about standardized all package sizes and styles for the duration.

**BAGS**—For the shipment of dry products, flakes, chips, and other bulk materials ordinarily shipped in barrels, boxes, etc., paper bags of various types may have possibilities to which the average manufacturer has evidently not given much thought in the present emergency. Many insecticide and dry chemical specialty products have switched over to bags in recent years, and the present general container problem might open up new uses for bags which are worth con-

sidering. Inasmuch as there are strong, durable waterproof bags of various types available, they may present a solution right now to the cheaper and more convenient packaging of other dry products in the soap, insecticide and allied fields. Of course, they are no substitute for steel or glass, and can afford no direct relief in this direction, but by taking the pressure off other types of packages such as wood barrels, fibre drums, kits and pails, they may have an indirect bearing in helping to save steel.

**PACKAGE COSTS**—Into the picture of enforced package changes as a result of war conditions, the subject of increased cost has been injected. Were it not for ceiling prices on soaps, cleaners, insecticides, disinfectants, and the like, the matter of higher cost due to packaging changes would not be serious. The additional cost of packaging and of higher freight would just be added to the price of the item under question. But this cannot be done today. Ceiling prices prevent it. In the food industry where enforced package changes brought higher costs, the O.P.A. permitted manufacturers to add the increased cost of the new container,—*and nothing else*,—to the price. Similar consideration has already been given to this same idea in the field of insecticides, disinfectants and allied products, and a conference with officials of the O.P.A. was held by a group of twenty manufacturers in New York on Sept. 4.

Increase in package costs may vary widely in disinfectants, insecticides, soap specialties, etc. according to the type of package. Where the switch is from a pint can to a pint bottle, for example, the naked cost of the bottle is slightly less than the can. But the cost of the shipping case, etc. is greater, while the freight shows a marked jump. The overall increase in cost of the product (fly spray) and container delivered to the customer in the pint size bottle is about 10 per cent. If the O.P.A. considers only the naked cost of the bottle versus the can, as in the food industry, they will ignore the main increase in expense which the manufacturer must stand,—the freight.

When the larger containers are

considered, such as gallon bottles and 5, 10, and 13 gallon carboys, the increased cost of the container may show a very sharp increase over the can or drum equivalent. The bottles or carboys as such cost far more than cans. According to the value of the material being shipped, the percentage over-all increase in cost will show a wide variation. For example, shipping a liquid in 13 gallon carboys as against 55 gallon one-time shipper drums would show an increase in cost of about 55c per gallon for the carboy. In a product worth \$5.50 per gallon, this would be only ten per cent, but in the case of a lower cost item which sells for 55c per gallon, the first cost of the carboy would exactly double this figure. With no experience on rate of breakage or other losses in carboys or bottles, manufacturers do not know how much higher this latter would increase their costs. When the higher cost of freight,—in some instances the total weight of a 55 gallon drum of liquid would be tripled or quadrupled by shipment in carboys,—is considered, it is difficult to see how some manufacturers could continue to operate if they were not given adequate relief from present ceiling prices by the O.P.A. To allow for the increased cost of the container only and to give no consideration to other cost factors, would be definitely unfair and inequitable. At any rate, the O.P.A. has this matter of increased cost of packaging under consideration,—figures have been submitted by a number of manufacturers for the consideration and study of the O.P.A.—and their decision may be so important that it may determine to a considerable extent whether some manufacturers will or will not stay in business. Further details on this phase of today's packaging problems will be published at a later date.

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An all-purpose sulfonated oil having 22 per cent of combined  $\text{SO}_3$  is announced by Jacques Wolf & Co., Passaic, N. J. Known as Apasol, this new sulfonated oil is recommended for use in a variety of textile processes. It is said to have an effective softening action and to be resistant to acids, lime and magnesium salts.



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**80 JOHN STREET, NEW YORK CITY**





# INSIDE NEWS

OCTOBER

PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y.

1942

## Modern Metal Lithography

BY W. N. MISURACCA

*Director of Lithography, National Can Corporation*

The decoration of metal packages is basically a lithographic process, modern offset lithography being in fact an offshoot of metal lithography.

Lithography was formerly regarded as being based on the antagonism between water and grease, but modern research has considerably altered that viewpoint. It can now be said that lithography is not necessarily dependent upon the antagonism between grease and water, but rather on the lack of miscibility between any two substances. The fact that water is still used in the lithographic process as one of the unmiscible substances is because it is easily obtained at practically no cost.

It is this newly accepted theory that has made possible the enormous progress in the use of the photo-mechanical method of reproduction. When used in conjunction with

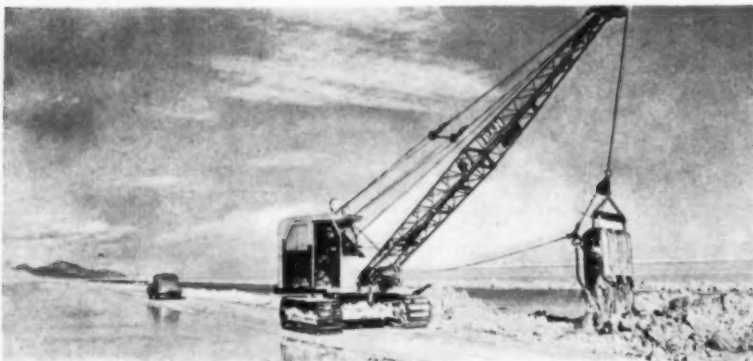
natural color photography, this method gives us a new conception of the possibilities of decorating packages in the future.

Persistently—and unsung—scores of research laboratories are seeking the answer to many everyday problems in packaging. As a result of these combined efforts, a new lithographic printing plate of stainless steel has been developed. It offers definite advantages over the old plates which were made of the softer metals, zinc and aluminum. The stainless steel makes possible a higher speed in lithographing and a considerable improvement in the lasting quality of the printing plate and in the quality of the work itself. Unrelenting research has also produced lithographic inks which possess extraordinary brilliancy and resistance to fading. In some cases, the time required to dry these inks, when applied on a metal sheet has been

reduced from the orthodox time of about twelve minutes to three or four seconds.

Today, however, many of these new developments have of necessity been held in abeyance. But a glimpse into the future reveals that one day the can making industry will have finishes which will rival enamels in hardness and appearance. These finishes will possess a phenomenal resistance to various products and will go far toward making a metal container the ultimate in packaging.

Creditable though the accomplishments of the can making industry have been in the past, we can look to the future with even greater expectations of success in the decoration of metal containers. Offset lithography, to which the can manufacturers have contributed so much, will establish new standards of excellence and durability after the war. (207)



### Plenty of Salt for Everybody

America need never fear a shortage of salt. While it is being mined or taken from the sea or brine wells in but a few states, with Michigan producing the largest share, it is believed to be almost everywhere. The Great Salt Lake in Utah is often called the world's greatest source. The photo shows a dragline building brine evaporating beds or ponds on the Great Salt Flats. The briny water is pumped into these beds where it evaporates and forms crude salt which is then refined.

Most of the salt from this region is produced in this way, which is known as the solar process. Today, salt is playing an important role in war factories. Salt tablets prepared with dextrose, taken orally, are a preventative of heat fatigue—heat cramps and sickness—caused by excessive sweating. Medical authorities say that sweating robs the human body of essential salts which must be replaced to maintain worker efficiency. (208)

### Soap Spray Kills Japanese Beetles

One of Japan's more destructive gifts to the United States, the Japanese beetle, may be eradicated by a recently patented spray. The spray contains soap, rosin soap, corrosive sublimate and nicotine. The soaps not only act to emulsify the components so that they may be sprayed, but also supplement the destructive power of the poisons by drying up and clogging the insects' breathing tubes. The spray contains: rosin, 10 lbs.; lye, 1 lb.; fish oil soap, 1 lb.; corrosive sublimate, 1 lb.; nicotine sulfate, 1 oz.

The first three ingredients are boiled in 10 gallons of water until the mixture turns black; the corrosive sublimate and nicotine sulfate are then added in 20 gallons of water. For spraying fruit trees, hardy shrubs, grass and weeds, the mixture should be diluted with two parts of water. For beans and other delicate plants, dilute with three or four parts of water. (209)

According to a recent magazine article, claim has been made that there are 4,000 shades of red, and it is stated that the United States Bureau of Standard recognizes "2½ times" that number. Take your choice!

(Advertisement)



# BY NATIONAL CAN



OCTOBER

PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y.

1942

## Tannin and Gelatin Clarify Apple Juice

Methods of clarifying apple juice with tannic acid (tannin) and gelatin solutions have been worked out in Canadian research. The two materials are dissolved in water to make separate stock solutions. Trial amounts of these stock solutions are then added to samples of the apple juice, first the tannin solution and then the gelatin solution. The least amount of gelatin to give the desired clarification is selected, and quantities for adding to commercial batches are worked out from the results of the sample tests. Quantities of materials and directions for making and using the stock solutions are available.

(210)

## A Tight Case Delivers The Goods

Distributors of canned foods don't like to receive them in shipping cases that are split or broken. Shipping cartons that don't stand up usually contain dented cans, and dented cans don't sell readily. Approaching the matter of damaged shipments from an objective viewpoint recently, several canners have found that they were buying shipping containers that were too large. Investigation in the warehouses of one prominent canner indicated that fibre board cartons bought from one of several carton manufacturers gave thoroughly satisfactory service. These particular cartons were supplied in dimensions 1/16 inch less in length and width and 1/8 inch less in height than the cans themselves. The manufacturer contended that only by an interlocking or overriding of the seams of the can could a tight package be obtained. The canner found this contention entirely correct.

(211)

## Canned Butter Keeps Indefinitely

Lack of refrigeration on ships or in storage warehouses need not keep the dairy industry from supplying "butter" to the armed forces and civilian populations in tropical countries, according to the United States Department of Agriculture. Pure butteroil and skimmed milk powder can be shipped to tropical countries, held for a year or more, if desired, and then made into good butter with the aid of a little cold water, according to the Bureau of Dairy Industry. The Bureau has recently perfected a method of preparing pure butteroil and packaging it in 2-lb. tin cans so that it will keep almost indefinitely. For large shipments, metal oil drums are considered ideal containers, but wooden kegs are being accepted because they contain no critical materials.

(212)

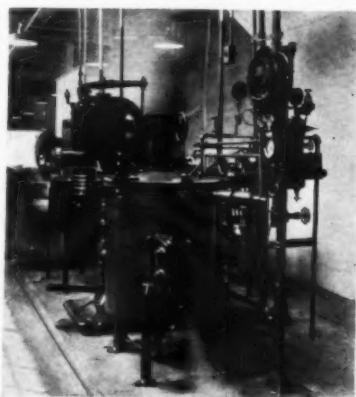
## Hormone Sprays Help Save Sugar

Cooperation between growers and canners might help offset shortage of sugar, according to reports on the use of hormone sprays and ducts. In tests, where they were used, it was found that in nearly every case the acid content of the fruit decreased and the sugar content increased. Such fruits would require less sugar for processing. Other advantages also accrued from the use of the hormone sprays, notably fewer drops from fruit trees.

(213)

## "Research Is Organized Thinking"

*National Can Corporation  
Puts Laboratory Theory  
Into Everyday Practice*



*A View in the Processing Laboratory*

This complete canning equipment, reduced in size, serves to establish the important connecting link between laboratory theory and sound commercial practice in the canning of foods. Problems of heat penetration, new product compositions, effects on various lacquers and cans made from substitute plates are studied here.

(214)

Prolific American female cockroaches raise an average family of 163 offspring during an adult lifetime of less than one year, according to recent studies of the family life of cockroaches. In some cases reproduction occurs in unmated females. Others continue to reproduce for a period of several months to a year after a single mating.

## Technical Topics

**VEGETABLES** — It has been found that blanching of vegetables enables a greater weight of such materials to be filled into cans. But it has little effect on the pressure developed in the cans, provided the cans are heated to a high temperature before the cans are closed. The color of vegetables is not appreciably improved by blanching, but the texture and flavor of certain varieties were better.

(215)

**QUICKSILVER** is now being commercially rectified to a purity of 99.99995 percent by a large American manufacturer of electrical equipment. Chief use of the highly purified mercury at the present time is in power rectifiers, particularly in plants refining magnesium and aluminum.

(216)

**SERPENTINE SUPERPHOSPHATE** is finding application as a fertilizer material in New Zealand in place of ordinary superphosphate. The new material is stated to contain the magnesium and silica of the original serpentine in activated form. The activated silica in the mixture is a definite aid to plant growth.

(217)

**ERGOT PRODUCTION** by artificially infecting rye with the fungus which forms the source of the material is being investigated in Canada. Improvement in agricultural methods which have diminished the amount of naturally-infected rye of late is responsible for the experimental program.

(218)

**ZINC DUST** of high reducing power may be produced by direct electrolysis according to a description in a recent British trade journal. It is declared that the zinc tends to separate in powder form especially from solutions of zincate.

(219)

**COSMETIC OIL**—An essential oil similar in odor to citronella and lemongrass oils is being produced in Kenya on an experimental basis. It is declared to be obtained from the leaves of *Leptospermum citratum*, a shrub or small tree of the Myrtaceae order which is found in the wild state in Eastern Australia. The oil is stated to be suitable for use in lotions of the eau de cologne type and in soaps.

(220)

*Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquirers to the original source of the article. Write to National Can Corp., 110 E. 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.*

(Advertisement)



**A more  
POWERFUL  
TOXIC AGENT  
for insect sprays**

★  
**MADE IN THE U.S.A.**

# thaneite

A new toxic agent, Thanite\*, for insect sprays kills more flies in a 2% solution than a 5% solution of standard pyrethrum extract. Knockdown and repellency are also high.

## Kills Most Insect Pests

Thanite is equally effective for moths, mosquitoes, roaches, bedbugs, ants, silverfish, spiders, and other insects. It is used with great success in heavy-base oils for cattle sprays.

## Stability Simplifies Packaging

Of particular value at this time, when certain packaging materials are unavailable, is the stability of sprays containing Thanite. They can be put in all types of containers used for insecticides, and will not deteriorate even when exposed to sunlight in flint glass bottles.

## Tests Will Convince You

The results of Peet-Grady tests on Thanite sprays are shown in the table below. Can you get as good results with the ingredients you are using? Make your own comparative tests and you will want Thanite in your sprays.

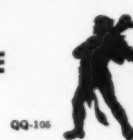
HIGH KILLING POWER IN LOW DILUTIONS									
Type of Base Oil	Percentage of Thanite	Dilution Ratio	% Knock-down 10 Minutes	% Dead 24 Hours	Grade	Rating	% Dead & Moribund	Grade	Rating
Deodorized Kerosene	1.75	1:57	98.4	41.2	B	+ 0.8	51.0	A	+ 9.9
"	2.00	1:50	98.9	52.4	A	+12.4	65.3	AA	+24.7
"	2.50	1:40	99.2	59.5	AA	+19.1	75.4	AA	+34.3
"	3.00	1:33	99.7	65.2	AA	+24.8	83.1	AA	+42.0
"	5.00	1:20	100.0	86.1	AA	+41.6	94.6	AA	+48.7
50 Viscosity White Oil	1.5	1:67	94.8	56.6	B	+ 3.7	No moribund flies.		
"	2.50	1:40	99.5	78.5	AA	+25.6	No moribund flies.		
"	5.00	1:20	99.6	89.8	AA	+36.9	99% dead and moribund.		

NAVAL STORES DEPARTMENT

**HERCULES POWDER COMPANY**  
INCORPORATED



961 MARKET STREET, WILMINGTON, DELAWARE



QQ-106



# WHAT TO EXPECT WHEN YOU ORDER **PARAPONT\***

## **PURITY...**

Highest standards of purity are maintained in the manufacture of Du Pont "Parapont" para-dichlorobenzene. Result is a para-dichlorobenzene that is always *white, lustrous, free-flowing*.

## **UNIFORMITY...**

No matter how large your order, every drum of "Parapont" will contain the same fine quality para-dichlorobenzene. Users rely on this consistent uniformity. That's why so many of them re-order so often.

## **ADAPTABILITY...**

To meet every commercial need, Du Pont makes "Parapont" in seven different granulations. Your order can be filled on short notice, moreover, because Du Pont always has an adequate supply on hand. Place a trial order with us. We believe you'll want more.



®TRADE MARK

E. I. DU PONT DE NEMOURS & CO. (INC), ORGANIC CHEMICALS DEPARTMENT, WILMINGTON, DELAWARE



...and there's also a Right Way.

To be properly perfumed, an insecticide should be put into the hands of a competent perfumer, experienced in this special field. Insecticides must be carefully treated so that the proper balance between base odor and perfume be achieved. There is a right way to perfume an insecticide which leaves no obnoxious base odor and no perfumy pall.

VAN AMERINGEN-HAEBLER, INC.  
315 FOURTH AVE. ★ NEW YORK CITY

*For Odor Corrections-Use*  
**ISOBLEND**  
 NEW ISOPROPYL ALCOHOL DEODORIZER

*I*t is sometimes necessary for a manufacturer to use Isopropyl Alcohol in place of Ethyl Alcohol, although the odor of Isopropyl Alcohol often works against the sale of the product.

In order to modify this characteristic odor and make it more pleasant, we suggest the use of our new Isopropyl Alcohol deodorizer "ISOBLEND".

Why don't you order a small quantity and experiment yourself to determine the exact degree of odor correction your products require.



**Use:**  
 $\frac{1}{4}$  OZ.  
 PER GALLON



**AROMATIC PRODUCTS, INC.**

15 East 30th Street, New York

Factory: Springdale, Conn.

ATLANTA

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MEMPHIS

PITTSBURGH

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# SYMBOL *of* FREEDOM

Silent and awestruck stood the early explorers and adventurers who dared the wilderness to gaze upon the great Falls at Niagara. And year by year in story and legend its fame grew—until Niagara became a symbol of a great and glorious new country. Free, untamed, resistless, it spoke in resounding tones of a land of far reaching spaces...broad rivers...

tall mountains...fertile valleys...and boundless opportunities.

Like the river at Niagara, a stream of humanity broke away from its ancient, sluggish ways. It plunged into swift-moving rapids. It flowed through the hills and valleys of America. It built cities and farms, turned desert waste into rich farm lands, created mills and

factories, gave birth to a new and better way of life for which we are all fighting and working today. And still this river of humanity flows on! The truth of its progress and its ideals are echoed throughout the world. And still Niagara flows on—symbol of the restless energy, the limitless abundance that is America.

*We who work within sight and sound of Niagara Falls are devoting every ounce of our energies and facilities to speeding the flow of Chemicals for Victory.*

**CAUSTIC POTASH • CAUSTIC SODA  
PARA • CARBONATE OF POTASH  
LIQUID CHLORINE**

FROM THE ORIGINAL BY FRANCIS CRISS...IN NIAGARA ALKALI COMPANY'S COLLECTION OF PAINTINGS OF NIAGARA FALLS



**Niagara ALKALI COMPANY**  
60 EAST 42nd STREET, NEW YORK, N. Y.





## BLUE WILL BE BACK!

Unavailable now because of war restrictions, rich, royal Maryland Blue will be back to "stop the eye and start the sale" when you need it most—in post-war competition. Put a memo in your post-war plans file: "Look into the merchandising advantages of Maryland Blue Bottles and Jars."

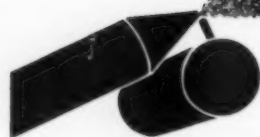
## Maybe Maryland makes the Style you Seek

Send for samples of Maryland Flint bottles and jars—available in many sizes—styled for selling such widely varied products as polishes and pharmaceuticals, cosmetics and cleansing fluids. Included among Maryland Flint designs are those formerly made in the famous (but now war restricted) Maryland Blue. Write, telling us the nature of your product and the sizes in which you are interested, and we will send appropriate samples.

## Maryland Flint Bottles & Jars

MARYLAND GLASS CORPORATION, BALTIMORE, MD.  
 .. New York: 270 Broadway .. Chicago: Berman Bros., 1501  
 S. Laflin St. .. St. Louis: H. A. Baumstark, 4030 Chouteau  
 Ave. .. Memphis: S. Walter Scott, 435 S. Front St. .. Kansas  
 City, Mo.: Aller Todd, 1224 Union Ave. .. Cincinnati: J. E.  
 McLaughlin, 401 Lock St. .. San Francisco: Owens-Illinois  
 Pacific Coast Co.

# ORBIS AQUASPRAY<sup>TM</sup> PERFUME OILS



## FOR BETTER AQUEOUS DEODORIZING SPRAYS

because they are so scientifically treated that a finished spray in permanent milky emulsion form is obtained by merely mixing 3 ounces of "Aqua-spray" and 3 ounces of formaldehyde solution U.S.P., with sufficient water to make 1 gallon. The finished cost is less than 38 cents per gallon.\* This is a real profit producer.

Such sprays are unexcelled for deodorizing foul air in homes, institutions, hospitals, theaters, etc.

\* Based on the gallon price of "Aqua-spray."

### ODORS AVAILABLE

Carnation	Narcisse
Gardenia	New Mown Hay
Honey Aroma	Orange Blossom
Jasmin	Persian Bouquet
Lavender	Pineneedle
Lilac	Rose
Locust Blossom	Syringa
Mint	Violet

Special odors furnished on request.

\$2.00 per pint

\$14.00 per gallon

A request on your letterhead will bring further details and sufficient sample for 1 quart of finished spray.

# ORBIS

## PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK - FACTORY & LABORATORY, NEWARK, N.J.

CHICAGO  
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Water Soluble Gums  
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Zinc Oxide French



Cosmetic Raw Material  
Oleo Resins  
Perfume Bases  
Olive Oil

Fruit Flavors  
Food Colors  
Quince Seed  
Irish Moss





## Worth looking into!

No "butts" about it, glass is a solution to your packaging problem that will more than suit you! It's plentiful...and the use of it will help America conserve steel, tin and tinplate.

There are other reasons, too, why so many manufacturers are using Anchor Hocking glass. Many new developments are responsible for the array of excellent advantages it gives you today. But that's not all. Anchor Hocking also gives extra benefits at no extra cost...the services of its experts in engineering and in biological and chemical research. These men

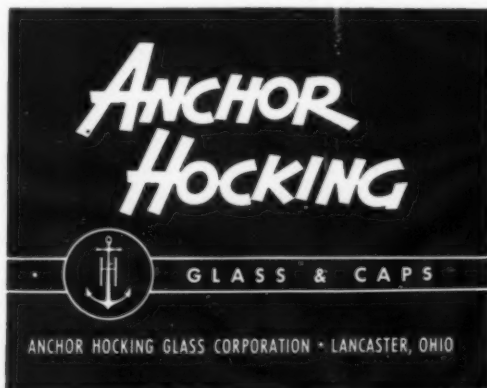
know their business inside out, can be helpful to new users of glass in many ways, including simplifying and expediting change-over.

Today—call in your friendly Anchor Hocking packaging engineer. Ask him about the Anchor Hocking complete package—container and closure, made for each other by one company, available from a single supply source. And remember—whether you want the complete package or the containers and closures separately, your best buy is Anchor Hocking!

### Worth looking into!

#### *Anchor Hocking Containers and Closures*

Anchor Hocking Narrow Mouth Rounds are outstanding containers for insecticides, rubbing alcohol, liquid polishes and waxes, and a wide variety of household chemicals. 18 sizes are available, ranging from 1½ oz. to 128 ozs. Pint and quart sizes are illustrated. These containers are easy to dispense from, make it possible to see quantity at all times. Available in amber or crystal.



The Anchor Improved G.T. Cap... Pitch of cap thread and glass container thread matches throughout their entire length, gives better, tighter seal. Absence of interference between cap and container threads makes cap easier to spin off or on. Fine knurls, cylindrical side walls and neatly turned wire edge provide better appearance.

# D. O. Purified Pyrethrum Extract 20%

It is a pleasure to respond to inquiries from the scientific community which has been particularly interested in the purification of pyrethrum. D. O. Purified Pyrethrum Extract 20% is a product of an unusual concentration of pure pyrethrin, a natural preparation we have obtained from the pyrethrum plants grown in the Andes mountains of Peru, which are the source of the pyrethrum and other natural products.

It is difficult as yet to appraise the far-reaching results which are available to the product of this quality will have in the expansion of the uses of pyrethrum, but it is certain that it will be spectacular.

Our satisfaction in the recognition already accorded to the superior qualities of D. O. Purified Pyrethrum Extract 20% is tempered with regret that the special requirements for which it alone will serve are so great as to leave little or none available for general use.

**DOBGE & OLCOTT COMPANY**  
100 VARDE STREET • NEW YORK, N. Y.  
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Plant and Laboratories, Brooklyn, N. Y.





# *Memorandum*

## **FOR INSECTICIDE MANUFACTURERS . . .**

Kenya can produce an adequate supply of the **FINEST PYRETHRUM** to meet all requirements, but has been suddenly confronted with enormous, increased and unexpected demands for military use, — for steadily increased requirements of agriculture, as well as for more prosaic household uses.

This enormous demand is further proof of the efficiency of **KENYA PYRETHRUM** and every effort is being made to meet it.

**KEN** **YA** **PYE**  
REG. U. S. PAT. OFFICE

**Meaning KENYA PYRETHRUM**  
**THE GREAT, NATURAL SAFE VEGETABLE INSECTICIDE**

New information regarding Ken-Ya-Pye indicates its effectiveness in the control of many types of insects. Its superiority is based on high pyrethrin content, its safety and availability.

**KEN-YA-PYE is the enemy of household, garden and farm insect pests**



<b>1. What is meant by the term "Phenol Coefficient?"</b> 1. Carbolic Acid. 2. A measure of Germicidal value. 3. A term to confuse the buyer. 4. Heat ratio measure.	<b>7. A good Insecticide should</b> 1. Taste good with Scotch. 2. Smell awful. 3. Kill insects. 4. Leave a greasy film.
<b>2. A deodorant</b> 1. Disinfects. 2. Masks or destroys odors. 3. Kills insects. 4. Makes friends and influences people.	<b>8. Disinfectants are usually tested against</b> 1. Japs. 2. Bar flies. 3. Typhoid germs. 4. Jitterbugs.
<b>3. Ordinary Vegetable Oil Soap</b> 1. Cleans. 2. Disinfects. 3. Slides around the tub. 4. Is edible.	<b>9. Disinfectant prices are generally based on</b> 1. Age. 2. Phenol Coefficient value. 3. Smell. 4. The phase of the moon.
<b>4. Coal Tar Disinfectant is made from</b> 1. Coal. 2. Tar. 3. Refined Tar Acid Oils. 4. A.W.P.A. Creosote Oil.	<b>10. In the last War more people were killed by</b> 1. Bullets. 2. Gas. 3. Disease. 4. Drowning.
<b>5. A Pine Oil Disinfectant should consist primarily of</b> 1. Pine Oil. 2. Soap. 3. Water. 4. Pine Tar.	<b>11. Before using a commercial disinfectant, dilute it with</b> 1. Alcohol. 2. Soda. 3. H <sub>2</sub> O. 4. Ammonia.
<b>6. Steam Distilled Pine Oil comes from</b> 1. Trees. 2. Samoa. 3. Petroleum. 4. Stumps.	<b>12. Coal Tar Disinfectant, when diluted, forms milky</b> 1. Solutions. 2. Complexions. 3. Curds. 4. Emulsions.

(Score 10 for each correct answer.)

120—Excellent, 100—Good, 80—Fair  
50 or under—you know what

(See Page 114 for correct answers.)



**BAIRD & McGUIRE, Inc.**  
Holbrook, Mass. — St. Louis, Mo.



# SANITARY PRODUCTS

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

**T**HE expected W.P.B. steel drum order restricting the packaging of insecticides, disinfectants, waxes, soaps, and the like was issued September 14. With an exception or two, it appears to be about as satisfactory as manufacturers can expect under war-time conditions. Its aim is to save steel and in prohibiting further purchases of either new or used drums for packaging these and other products, it should accomplish this purpose. The decision to permit manufacturers to use and reuse drums and pails already on hand is obviously sensible. To have frozen used drum stocks would have brought practical paralysis of shipments to the industry. As it is, present supplies of used steel containers may with unusual care and frequent repairs be made to stretch out a year or two while gradual conversion to other types of containers is undertaken.



**A**S YET the O.P.A. has made no move to permit manufacturers of insecticides, disinfectants, waxes, and similar products to advance their prices in line with higher costs for containers entailed by enforced package changes, either actually ordered by W.P.B. or anticipated. Except in the case of seasonal items such as household fly spray and stock spray, the time element is not pressing. In these and some other insecticide products, the 1943 selling season is about to begin. But those manufacturers who have changed their packages

or have planned to change them are in a quandary on prices,—and you cannot start selling until you know what your prices are going to be. We do not feel that O.P.A. will give too much consideration to higher fly spray prices this year because of higher freight costs resulting from a switch to bottles. A conference with O.P.A. on this matter is being held October 6 in Washington, but we now believe that it will be some time before O.P.A. makes a decision, and even then we do not feel too confident that they will allow a price increase on liquid insecticides for the 1943 season if precedent in the food field is a criterion.



**T**HAT conditions are becoming tougher and tougher for the average manufacturer of insecticides, disinfectants and allied sanitary chemical products is quite apparent as each month passes. Although the raw material situation in some respects has improved, in others it has become decidedly worse for manufacturers of civilian goods. Container problems have multiplied. It is expected that recent W.P.B. restrictions will be followed by others in the near future. On top of this, the problem of labor becomes more serious each day, competent workers in most sections of the country becoming harder and harder to find. In most of these respects, the sanitary products industry is in no worse position than dozens of other industries. However, this is no consolation to the average manufacturer trying to keep his plant running.



*Ewing Galloway photo.*

MILLIONS of pus germs pouring over your hands during the course of the day is a rather offensive thought. It is still more unpleasant if your hands are covered with numerous scratches and cuts forming fine harbors and incubation centers for these pus-forming bodies. Yet thousands of lathe operators' hands are subjected to this daily germ bath because the cutting oil which is used to lubricate and cool the cutting tool has not been treated with a germicide to destroy the bacteria that find the oil an excellent breeding site. These hardy little infection-forming germs like nothing better than to settle down in a new cut or scratch and raise a family,—much to the workers' discomfort. Hands and fingers broken out with boils and pus formations cannot turn out microscopically accurate work.

It often happens in many fac-

tories that the lathe operators' hands are constantly becoming infected and reinfected and they take time off frequently for doctor visits, treatments, etc., yet it never occurs to the persons in charge that the cutting oil is carrying the germs from one worker to another in a never ending stream. As the cutting oil flows over one worker's hands it can easily pick up bacteria from an open infection and carry the bacteria along the line infecting other workers' hands that are cut constantly with tiny slivers of metal.

There was never a time in the nation's history when it was more important to keep the hands and fingers of skilled workers in perfect condition. The safety directors or health directors of all plants where tool work is carried on should be acquainted with the risk of using cutting oil which has not been properly treated to destroy any bacteria present. As a general rule, every

## CUTTING

other sanitation measure is taken to protect the employees' general health but for some reason, it never seems to occur to anyone that cutting oil is a perfect means of transmitting germs from one body to another as it runs over each workers' hands time and time again daily.

"Cutting oil" is the term applied to the lubricating and cooling agent used in the cutting of steel. This cutting oil can be either straight petroleum oil especially compounded for the purpose or an oil-in-water emulsion. Some users prefer one type over the other. However, each serves its purpose and that is to keep the metal cool during the cutting process and also to act as a lubricant to ease the cutting strain and to protect and prolong the edge of the cutting tools. Either type of cutting oil provides a fine breeding ground for various types of putrefying and pus-forming organisms. The oil as a rule is neutral and is generally stored at normal temperatures. In the process of its use it picks up organic matter and germs of various kinds.

When an oil-in-water cutting oil (emulsified cutting oil) becomes infected with putrefying bacteria the emulsion breaks down and the oil and water separate, the oil floating to the top, forming a layer. The separated mixture is useless because it no longer has any lubricating properties.

There is only one method to prevent the breaking down of emulsified cutting oils by bacteria action and that is to incorporate a disin-

# OIL DISINFECTANTS...

By Jack C. Varley

Baird & McGuire, Inc.

fectant or germicide into the emulsion. When bacteria enter the cutting oil, they are immediately destroyed by the disinfectant and the emulsion is unaffected. The disinfectant must be added to the fresh oil, however, because once the emulsion has been broken by the action of the bacteria it is difficult, if not impossible, to return it to its original state.

It should be noted here that some disinfectants which are suitable for use in emulsified cutting oils to prevent the breaking of the emulsion by bacteria are not sufficiently powerful to destroy the pus-forming organisms which infect the hands of the men operating the lathes and cutting machines. In some instances it may be necessary to use two types of disinfectant in the cutting oil; the first, to take care of putrefying bacteria and hold the oil in its emulsified state; the second, probably another type of disinfectant to destroy the infection-causing bacteria which can do so much damage to the skin.

The cutting oil itself is generally an ideal medium to promote the growth of bacteria. Fresh cutting oil frequently becomes inoculated with infectious bacteria when a boil or infection on an operators' hand is opened by a sliver of steel and the bacteria from the infected area find their way into the cutting oil and are carried back through the return system into the main storage tank. Here, of course, they breed and multiply time and time again until the cutting oil in the storage tank is fairly alive with these

organisms. From this point on, as other workers are cut by small bits of steel, their hands are more than likely to become infected and break out with boils or pus formations caused by the contaminated oil.

Tests on cutting oils have shown in some instances that the bacteria count runs as high as 3,000,000 per cc., in effect, almost a pure culture insofar as the number of bacteria present is concerned. Of course, all oils are not contaminated to this degree,—but whether the bacteria count is high or low, the danger of infection is present.

SINCE the recent stimulation of industrial activity, particularly in the large plants manufacturing war materials, a renewed interest has been shown in the use of disinfectants in cutting oils. Many years ago several of the large metal working plants experimented with the use of cutting oil disinfectants, primarily the coal tar type, and were well satisfied with the results. Almost immediately after their use, infections on workers' hands caused by contaminated cutting oil stopped. Continued use of disinfectant in the cutting oil acted both as a pre-

servative for the oil itself and as a means of protecting the machine operators' hands.

Since our entry into the War with nearly all manufacturing plants working at full capacity 24 hours daily and with many hundreds of thousands of additional workers handling intricate steel working machinery, it is essential that the hands of these skilled workers be protected. Large manufacturers know the vital importance of keeping a skilled mechanic's hands in good shape, free from boils and other infections, in order that he turn out accurate work. However, many plant superintendents are not aware that the infections frequently occurring on their workmen's hands are caused by bacteria present in the cutting oil. The disinfectant industry should take immediate steps to call this fact to the attention of large industrial plants and outline the proper remedy.

The cutting oil disinfectant itself is generally composed of high boiling cresylic acids in combination with suitable coal-tar hydrocarbons and saponifying materials. The phenol coefficient of this type of disinfectant is approximately 20 although it can be manufactured in higher phenol co-

Why they are more important today than ever to reduce the spread of infection and lost man-hours in machine shops



efficient values. The disinfectant is generally used in the proportion of one part disinfectant to 200 or 400 parts of cutting oil (depending on the type of cutting oil, whether contamination is present or not, how frequently cutting oil is changed, etc.). Here very definitely is an illustration of the old adage, "An ounce of prevention is worth a pound of cure." The proper use of a disinfectant in the cutting oil serves to kill the bacteria present in the oil and at the same time provide a germicidal wash over the operators' hands all the time he is running the machine. Hands will continue to be cut constantly by tiny slivers of metal, but the bacteria in the cutting oil will be killed or rendered impotent and an infection from this source does not take place. If nothing is done to counteract this condition the pus-forming bacteria may sometime find their way into the blood stream and the worker "breaks out" with boils all over the body.

To insure a minimum of infection resulting from the numerous cuts, scratches, and abrasions to which the skilled workers' hands are subjected, it is necessary to use a powerful disinfectant in the cutting oil. A high-phenol coefficient disinfectant is recommended for this purpose because of its germicidal potency and the fact that it requires only a small amount of the disinfectant to treat a relatively large quantity of cutting oil. There is little if any trouble from the application viewpoint because it is only necessary to add the requisite amount of disinfectant to the cutting oil, agitate the mixture, and it is then ready for use. The amount of disinfectant used and the frequency with which it must be added is an individual matter with each manufacturing plant, depending on how often oil is changed, how often fresh oil is added, etc.

The large manufacturing plants using cutting oil have storage tanks ranging from a capacity of 50,000 gallons downward. The oil is generally treated in the tank simply by adding the proper amount of disinfectant to the oil in storage and is mixed thoroughly by blowing with air or using mechanical agitation. The oil is then

run through pipes direct to the steel cutting machines where it is used as a lubricant and cooling agent. It is then caught in troughs under the machine, strained to remove the fine particles of metal, and then pumped back into the main storage tank. Periodically, fresh cutting oil is added to the tank and with it the requisite amount of disinfectant. From time to time, even though fresh oil is not added, additional quantities of disinfectant are put into the oil to counteract any organic matter which may have found its way into the oil over long periods of use.

Research is being conducted at the present time towards producing cutting oil disinfectants which will have more potent germicidal value. The problem is not a simple one, however, because there are many types of cutting oils and emulsified cutting oils to contend with, some affording greater protection to the bacteria than others. Synthetic phenol disinfectants are being experimented with in this field. Combinations of coal-tar cutting oil disinfectants and synthetic phenol disinfectants are also proving of interest to the disinfectant manufacturers.

The disinfectant used for the purpose of stabilizing or preserving the emulsion type of cutting oil should contain a soap base that is compatible with the emulsifying material used in formulating the cutting oil. In other words, some cutting oils which are emulsified with naphthenic acids might not work properly if the germicide used is formulated with a saponifying material not compatible with naphthenic acid.

The coal-tar cutting oil disinfectant is of the emulsifying type and generally stays in perfect suspension with emulsified type cutting oils. With straight cutting oil, however, there is sometimes a tendency for the disinfectant to separate or settle out but this can be controlled by agitation. The separation, if it takes place at all, is very slow and the fact that the oil is in use and in motion means there is generally enough automatic agitation to keep the disinfectant in complete suspension.

There is a considerable amount

of work to be done in this field as yet but in the meantime, the products which are on the market and which have proven their efficiency in past years should certainly be called to the attention of all prospective users today more than ever so that advantage can be taken of this important phase of industrial sanitation as a means of saving lost time of workers.

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A dust containing 1-2 per cent of rotenone with cassava starch as carrier killed ticks and insects on dogs and cats without injury to the hosts. A. de Jesus and R. B. Gapuz. Rev. Applied Entomol. 30B, 36 (1942); through Chem. Abs.

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A parasiticide contains as an active constituent a product of reaction of acetyl acetone with ammonium thiocyanate. The preparation is in the form of a paste and contains in addition bentonite, a wetting agent and dipotassium phosphate. Wm. P. terHorst. Dominion Rubber Co., Ltd. Canadian Patent No. 406,956.

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An improved method for estimating rotenone in derris root, employing the carbon tetrachloride complex separation, is described. It has been shown by three groups of workers to give concordant results with various types of root. Methods of determining moisture content and chloroform extract are also given. Their adoption in the United Kingdom as standard methods is recommended. H. E. Coomber, J. T. Martin and S. H. Harper. *J. Soc. Chem. Ind.* 61, 110-12 (1942).

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Some laundries have been experimenting with the idea of releasing liquid air in the bottom of their washers, and are attaining some bleaching success in that connection. One of the problems has been to secure a satisfactory ingredient to add to the water in order to hold the oxygen and prevent its release too quickly. *Laundry & Dry Cleaning J. of Canada* 22, No. 7, 17 (1942).



# AGRICULTURAL INSECTICIDES

No war-time suspension of experiment station research as entomologists expand efforts to protect nation's food supply . . . summary of some significant facts from 1942 state experiment station reports

*By H. H. Slawson*

THE wide and varied research program which state agricultural experiment stations have been conducting with considerable benefit to the insecticide manufacturing industry is not going to be suspended or neglected because of the war. This assurance can be inferred from expressions of policy made in a number of the annual reports issued by the stations since Pearl Harbor. The agricultural scientists are faced with the important problem of helping to increase the nation's food supplies and to that task they are giving their full efforts. Basic research will, however, be continued, this general attitude being perhaps best typified in remarks of Director H. J. Reid of the Purdue Station. Such research, says Dr. Reid, "is our best guarantee that we will be equipped to meet the next emergency and also to cushion the tremendous economic readjustments that must inevitably follow the present war."

Insecticide manufacturers can thus be confident that the program of practical investigation of their products will continue at the agricultural experiment stations. This means that projects which, in many cases, have been under way for years, can be expected to proceed without interruption until eventually the satisfactory answers can be found which only long-time research makes possible.

The latest experiment station reports available up to Sept. 1 do not yet reflect war time conditions. Emboldened, as usual, only brief outlines of progress, those sections dealing with entomological research indicate sub-

stantial advance in the scientific effort to prove the merits of commercially available economic poisons and to win acceptance of them by the farmers, a result which, in turn, benefits the insecticide industry. Because of space limitations, selections from the reports cover only some of the highlights of the last year's activities which reveal the nature of the cooperation agricultural scientists are extending to the "munitions makers" in mankind's war on his insect enemies.

In Maine, where virus diseases had made serious inroads on potato fields, scientists at the Orono station set themselves to the task of determining the compatibility of rotenone and certain commonly used copper fungicides with the object of reducing cost of control by checking both the virus and the aphids that help spread it, through one field operation.

Bordeaux mixture was used, along with other copper fungicides manufactured by the Sherwin-Williams Co., General Chemical Co. and Rohm & Haas Co. Just prior to spraying the plots rotenone in the form of derris root (4.8 per cent rotenone) was added to the fungicide at the rate of four pounds per acre per application. Tables indicating varying results accompany the report, which says: "The addition of rotenone to the copper spray fungicides increased the yield in all instances, the increase being from 16 to 31 barrels per acre." Rotenone reduced aphid population in all instances but where used with a 10-10-100 Bordeaux mixture, the insecticide appeared to increase yields somewhat less than in the

case of the other materials used. "The amount of net necrosis, leafroll and mosaic each was increased nearly a tenth by application of rotenone. The insecticide prolonged growth of the plants and accordingly prolonged the period of feeding for the aphids, which in turn probably resulted in more spread of the disease and in more time for the virus to pass down stems into the tubers."

In another experiment, copper spray fungicides were compared with Bordeaux mixture for control of blight disease. Products of the same three concerns mentioned above were again used along with one made by Tennessee Copper Co. Yields were reduced approximately 84 bushels per acre, according to the report, which adds "The fact that plots treated with factory-made copper fungicides failed to give as large yields as plots treated with Bordeaux mixture cannot be attributed to the ability of such fungicides to control late blight." Approximate odds in favor of Bordeaux mixture varied from 1 to 1 in the case of Tennessee Copper Co.'s tribasic copper sulfate to 19,230 to 1 with each of two other commercial products, "Spray-Cop," made by General Chemical Co., and Yellow Cuprocide by Rohm & Haas.

In a study of the effect of particle size on the fungicidal value of insoluble copper fungicides, Sherwin-Williams Co., cooperated with the Maine investigators by supplying two kinds of "Basi-Cop" differing from each other only in their particle size, one of 5 to 10 microns, the other two microns or less. "The plots sprayed

with fine Basi-cop yielded more and kept their foliage green longer than did the coarse Basi-cop," says the report. "The difference in yield was not highly significant, however."

In a test of oil as a carrier for copper fungicides, oil and an atomizing machine were supplied by Shell Oil Co., while fungicides made by Rohm & Haas and General Chemical Co. were used. Late blight did not develop so it was impossible to determine the effectiveness of the oil fungicides, but, according to the report, the experiment did show that it is mechanically possible to use oil as a carrier for copper fungicides.

New Hampshire agricultural station entomologists who studied "Penetration of Contact Insecticides," report that "It was found that methyl alcohol exhibits a more rapid and extensive penetration than any other alcohol in the series used. . . . It seems possible that the ability of the liquids to dissolve the epicuticle of an insect, which is of a waxy nature, may influence the rate and amount of penetration through the integument." Detailed data was published in New Hampshire station's Technical Bulletin No. 74, "Penetration of Certain Liquids Through the Pronotum of the American Roach." New Hampshire's report also cites development of an insect toximeter, previously described in *Soap & Sanitary Chemicals* for August, 1942, use of which secures uniform application of liquid to all surfaces of test insects.

CORNELL UNIVERSITY's agricultural experiment station at Ithaca reports funds of varying amounts for investigation of insecticide problems from American Cyanamid & Chemical Corp., Atlas Powder Co., Dow Chemical Co., Niagara Sprayer & Chemical Co., Inc., Texas Gulf Sulphur Co. and Tobacco By-products & Chemical Co., Inc.

Progress reports on Ithaca activities cover investigations of white grub and other forage crop insects; Mexican bean beetle; seed corn maggot; alfalfa snout beetle; clover root-borer, cut worms, onion thrips, wire worms and other pests. One paragraph

regarding Dutch elm disease states that: "Experiments with various sprays have demonstrated that both lead arsenate and sulfur are necessary to bring about a reduction in positive wounds and infections in attempts to control Dutch elm disease. In connection with the chemical treatment of logs, it appears that under the proper conditions a mixture composed of creosote, paradichlorobenzene, light petroleum oil and paraffin may be sprayed on logs to prevent beetle entry and to kill beetles already present."

In studies of nicotine as a stomach insecticide consideration was given to their contact action and it was found possible to classify nicotine compounds into several groups. "In the first, most toxic group," says the Cornell report, "are those compounds formed with fatty or naphthenic acids. A group with less toxicity includes compounds of nicotine with such materials as casein, alginic acid, pectic acid, Aresket, sulfuric acid, and a group of nicotinic compounds with alkyl halides and dialkyl dihalides. Fixed or insoluble nictines have little or no contact action. The high toxicity of the first group is believed to be associated with the toxicity of the acid part of the compound, the excellent wetting and spreading properties of the compound and an unknown activating or synergistic effect of the acid part of the compound on nicotine."

The rapidity with which nicotine spray residues are lost is considered one of the greatest disadvantages in use of nicotine sprays for fruit insecticides, Cornell points out, so they studied the residues from a variety of sprays on glass plates. The major loss was found to occur during the drying of the spray and it was also concluded that decomposition due to light may account for the rapid loss of nicotine from supposedly non-volatile compounds. Cornell's report also covers studies of sulfur and sulfur compounds in relation to control of insect pests, which produced some interesting results, for whose detailed enumeration space is lacking here.

Massachusetts Station at Amherst reports on use of fifteen proprietary and two home-made copper dusts

containing different sources of metallic copper for control of insects on cucumbers and musk melons. Formulas are listed for the five best treatments found for cucumbers and six for the melons. Another Massachusetts project involved a study of diseases of ornamental herbaceous plants caused by soil-infesting organisms, with particular attention to control measures. Results are reported from use of formaldehyde, Spergon, copper oxybate and Semesan.

Spraying experiments with eleven advertised insecticides recommended for combatting red spider mites on roses resulted in rating only one of them, known as Technical Man-nitan Monolaurate, as "very effective and outstanding." Two which combined rotenone and emulsified dispersal oils were rated as "moderately effective and satisfactory." The others, rated as "unsatisfactory," are listed in the report as rotenone combined with chlorinated heterocyclic hexylamine, powdered derris root and sulfonated castor oil, a commercial flour paste, monochloronaphthalene soap emulsion, a commercial preparation containing castor bean extract (ricin), and rotenone combined with hydrous aluminum oxide. Chemicals for control of cranberry insect pests and weeds were investigated in Massachusetts and detailed data covering results and conclusions are submitted in the report.

SOUTHERN state college entomologists pursued a variety of investigations into insect control problems peculiar to their sectional crops. Maryland's big canning industry was assisted by investigations by the Maryland Experiment Station at College Park into methods of control of corn ear worm, pea aphid, nursery insects, tobacco, hornworm, Japanese beetle, and the corn borer. One bulletin, No. 439, on "Studies of Corn Ear Worm Control," was issued. Among observations noted are the following brief statements: "Derris has proved superior to cube for pea aphid control; fine grinding appears to increase the effectiveness of derris powder." . . . "Derris sprays have given rather consistent results. Derris dusts are more variable

and under favorable conditions are better than sprays. Nicotine in sprays and applied by the vaporizer is more dependable than derris treatment."

Texas Experiment Station gave lengthy attention to insect enemies of the cotton plant and from the report the following is culled: "Boll weevil control: Calcium arsenate effectively controlled weevils and increased the aphid population. Nicotine sulfate-lime reduced that aphid population. Commercial calcium arsenate was more effective than either synthetic cryolite sulfur (85-15) or natural cryolite sulfur (85-15)."

Cotton flea hopper: Comparisons of ground sulfur, sulfur of microscopic fineness and a ground sulfur-calcium arsenate mixture were made in a series of tests. No difference was found in the effectiveness of these materials under a condition of low hopper infestation. A comparison of ground dusting sulfur with sulfur of microscopic fineness in spray form showed that sulfur dust was more effective in reducing hopper infestation than the sulfur spray.

Pink bollworm: In a "randomized block" arrangement, basic copper arsenate and cuprous cyanide dusts were less effective than cryolite dust composed of three particle sizes. Petroleum oil and nicotine sulfate were tested in the laboratory as ovicides. Each reduced the percentage of eggs hatching, but were more effective when combined.

Cotton bollworm: Tests were run to determine the comparative effectiveness of cryolite, arsenate of lead and calcium arsenate containing different percentages of water,—soluble arsenic pentoxide. Arsenate of lead and natural cryolite-sulfur (85-15) gave better control than calcium arsenate or synthetic cryolite-sulfur. In general, the plots treated with arsenicals yielded more cotton than plots treated with cryolites because the cryolites did not give adequate control of the weevils.

At the Westlaco, Texas, substation, experiments on control of ants indicated that carbon bisulfide and water applied to the depression at entrance to nests is "the most practical"

method. However, eradication on a big scale may be accomplished successfully, and economically by use of methyl bromide in soil auger holes with a tube injector, the Texas report states. No control was obtained by surrounding nest entrances with rotenone-bearing dusts. Nests surrounded with sodium fluoride were weakened for some time but later regained their strength.

Diseases of tomato leaf and fruit, the Texas investigators report, were greatly delayed in appearance and caused little damage when tomatoes were sprayed with Basicop, Copper Hydro 40, or Z-O. "These new chemicals," says the report, "merit recommendation for commercial use in East Texas. They cost less than Bordeaux mixture and are less injurious to tomatoes in dry weather."

Sulfur fed to Texas calves and goats infested with biting and sucking lice produced no indication that it had effect on the louse population. This project was financed by Texas Gulf Sulphur Co. and was conducted in cooperation with the U. S. D. A. Bureau of Entomology, division of Insects Affecting Man and Animals.

North Carolina experiments on peach tree borer control showed that "the use of ethylene dichloride emulsion is a better method than paragon," that station's 1940 report states, but the warning is given that users must strictly observe directions printed on labels. From tests of many materials for earworm control on sweet corn, the North Carolina scientists say "the most satisfactory results have been obtained from use of U. S. P. white petroleum oil of 200 to 300 second viscosity (Saybolt)." Another serious Tar Heel state pest, the peanut leafhopper, was "excellently controlled" by a mixture of 30 per cent pyrethrins and 70 per cent sulfur, while nut yield was 19 per cent larger and hay yield 55 per cent larger than from plots not dusted.

Kentucky Experiment Station at Lexington reports satisfactory experiences with ethylene dichloride emulsion for peach borer control but equally good control with paradichlorobenzene. Although the ethylene di-

chloride emulsion "costs more than paradichlorobenzene," it was determined in Kentucky that this higher expense was offset by the saving in time required for its application.

To control poultry lice, Kentucky's report tells of experiments with sodium fluoride powder, nicotine sulfate used as a roost paint, free nicotine used as a roost paint and nicotine sulfate applied directly to the bird. All four materials were equally effective in controlling body and shaft lice, all giving almost complete mortality. Both nicotine sulfate and free nicotine used as a roost paint gave poor control of head lice, whereas sodium fluoride and nicotine sulfate, applied directly to the bird gave excellent control. Studies of length of time nicotine roost paints are effective indicated that both nicotine sulfate and free nicotine are effective from three to six nights.

At the Gainesville, Fla., experiment station two new insecticides for citrus insects were tested but neither proved satisfactory against a long list of pests. One material was described as a castor plant product in liquid form and applied at concentrations recommended by the manufacturer. The other was sold in dry form but for application as a spray.

"It contained an oil, copper sulfate, lime, clay and other ingredients," says the report. "This material was not only worthless as an insecticide for citrus insects but was injurious to the trees. In one test the scale population was 16 times, in another 26 times greater in the sprayed plot than in the check. Many small twigs and some of the larger limbs of the trees died following the spray." No names were given in the report.

Tests of dusting equipment involving some new principles were made in Florida in cooperation with the originators. "This equipment is designed to apply dust fungicides and oil simultaneously," the report continues. "The dust is blown from a duster of conventional type while oil is atomized into the dust blast from separate nozzles attached to lips of the dust outlets. The equipment is heavy and requires so much power that a



large high-wheeled tractor is employed for locomotion and power.

"The practicability of the machine is evident in the fact that one man can operate it and dust 80 to 100 acres per day of potatoes, celery, tomatoes or beans, whereas three men are needed to spray 40 acres a day with the better type of power sprayers. Other advantages of vapo-dusting are that the oil helps to hold the fungicide on the foliage and can also be used as a carrier for oil-soluble insecticides. Some of the insoluble copper fungicides have proven to be very effective when applied with the vapo-duster. Thus it is possible to avoid use of copper-lime dusts, which would restrict operations to times when the foliage is wet and which interfere with some of the insecticides."

**I**N THE midwestern corn belt farmers have been storing increasing amounts of corn and other grain on their farms, a practice which has resulted in serious increase of stored grain insect pests. Tackling this problem in a series of fumigation experiments, the Iowa station at Ames reports that results showed conclusively that infested grain can be successfully fumigated. The process recommended calls for a mixture of three parts of ethylene dichloride and one part of carbon tetrachloride, applied to the surface of the grain at the rate of six gallons per 1,000 bushels of grain. This method, says the Iowa report, proved successful, except where grain temperature was below 60° F. or well above 100° F. or where structures were so loosely constructed as to permit rapid loss of gas.

Iowa Station also tells of spray experiments to determine if certain commonly used spreaders would increase the efficacy of lead arsenate as an insecticide for codling moth. Soybean flour, a casein-spreader and a commercial spreader-sticker containing sodium oleylsulfate were used and contrasted with the standard treatment of three pounds of lead arsenate in 100 gallons of water. "Analyses showed no significant difference between the several treatments," says the report.

South Dakota Station at Brookings reports on use of seven different insecticides applied as a dust or spray to potato and sugar beet fields for control of blister beetle. Products used included Paris green, Dutax and barium fluosilicate, Pyrocid dust 7 to 10 per cent, derris 1 per cent rotenone, lime, copper arsenate and Red River Mix. Results with each material are reported in detail. Regarding the use of airplanes for dusting, the South Dakota scientists say, "It was found that such methods could be used if necessary to protect the crop when plants are large. It is also very rapid and the cost not prohibitive."

Purdue Experiment Station at Lafayette, Ind., during 1940-41, continued work on eleven insecticidal mixtures to determine their effect upon both cucumber wilt and the beetle which carries this bacterial disease. High yields were noted but differences were not significant when compared against the various mixtures used.

In experiments with different sprays for codling moth control, Purdue investigators developed one treatment consisting of one heavy, well-timed application of lead-oil soap, followed by two or three covers of flocculated bentonite containing no stomach poison.

"Zinc sulfate, added to the lead arsenate-oil-lime combination reduced danger of foliage injury," the report states, "and offers promise of being a good treatment. When modified to exclude lime and include soap, certain other merits are apparent, as increased quality of fruit. The residue is easily removed to meet the tolerance."

Washington State Experiment Station at Pullman completed a lengthy investigation of the physical and chemical properties of mineral oils, fish and animal oils, vegetable oils and synthetic oils to determine their relation to insecticidal effectiveness. Specifications were developed for oils for many different purposes in insect control and plans were announced for two new projects covering field tests of the formulas.

Several insecticides prepared in

the form of very small "micronized" particles were studied and the behavior of micronized phenothiazine was described as "quite outstanding." Coverage obtained was "nearly the same as the coverage produced by the regularly milled product but the control was considerably better."

Investigating means for increasing the efficiency of sulfur and lime sulfur sprays for orchard mites and scale insects, the Washingtonians found that mortality of San Jose scale was greatly increased by addition of one per cent mineral oil to either liquid or dry lime sulfur at dilute concentrations. A commercial wetting agent, the report continues "added to a 3 per cent and a 10 per cent lime sulfur increased the efficiency by only 2 per cent. Use of elemental sulfur alone gave a mortality of 36 per cent, while use of 1 per cent oil and elemental sulfur resulted in a mortality of 95 per cent."

Wisconsin Experiment Station's annual report tells farmers that "for the first time there now appears to be a chemical that is satisfactory for killing poison ivy in orchards." Excellent results were obtained with ammonium sulfamate, mixed at the rate of one-half to one pound per gallon of water and applied at the rate of one gallon per 100 square feet.

Wisconsin investigators found that "It is possible to control both the cabbage worm and cabbage aphid with a single insecticidal mixture containing rotenone, nicotine and sulfur." Various formulas were worked out, none of these being admitted as "the best," but offered to the state's farmers as a means for reducing the number of field operations necessary for control of pests in the sauerkraut producing area.

Investigating ant control problems, Colorado Experiment Station at Fort Collins used seven different materials in 700 applications. The conclusion was reached that "sodium cyanide and water have given the most promising results."

Nebraska, like Iowa, had a stored grain pest problem and results of investigations are reported on in Cir-

(Turn to Page 103)



# *What the Housewife thinks about* INSECT SPRAYS

*By Christopher A. Murray*

HOUSEWIVES on the whole are uninformed concerning the composition of household insect sprays. A few had heard the old story of the daisy first grown in Persia which when dried and powdered would kill insects, and a few others had heard of "some flower or plant grown in Japan" which had insecticidal qualities, but none had ever heard of rotenone or knew that here were any synthetic chemical materials used in household sprays. The housewife does not seem to care what ingredients are used in fly spray as long as they kill the bugs and are safe to use, and she takes it for granted that they are perfectly safe because they have been marketed and sold for some time.

Women interviewed stated uniformly that they knew the insecticide mist must touch the insect in order to effect results. For the most part they realize that insect sprays are not fumigants. And they also seem to know that the pleasant odor is an added perfume and has no connection with the effectiveness of the product. Users would very likely not be impressed with more emphasis than is now placed on the details of knockdown and kill properties of a spray. They would rather be influenced by detailed information concerning its safety and the wider range of its possible use.

That insect spray can become an accepted household maintenance article is evidenced by the fact that among housewives who have tried it, practically all users consider spray a necessity item. For the most part, experience will indicate the advantage of having spray at hand ready for in-

stant use for flies in the kitchen, mosquitoes in the sleeping room, and possible clothes moths in the wardrobe. Ready acceptance of spray for her most apparent needs by the housewife should furnish the basis for more general all-around use to get full value from her insecticide. With an efficient sprayer, her spray may readily fill as well most of her home garden, vacation, and recreation insect protection needs.

## Brand Preference

FEW of the women interviewed had noticed any particular advertising of spray over the radio or in magazines. Most had noticed advertising in the local paper or in the neighborhood stores. Spray purchases reported were about evenly divided between the local grocery, drug, and ten-cent store. Only a few women had purchased spray from a hardware store. While the extent of this inquiry has not been sufficient to place great emphasis on this distribution, it might be supposed that women tend to purchase spray in stores they most often happen to visit regularly.

In most cases the housewives indicated that the local merchant influenced their choice of spray, not particularly by direct advice, but because women apparently tend to buy whatever insecticide happens to be on sale at the store they customarily patronize. In this respect, the influence of store displays and advertising has some effect. It should accordingly prove worthwhile for manufacturers to cultivate the local merchants and to provide them with the necessary information concerning spray. Their influence on consumption is undeniably great, and they can be a potent factor in passing on to the consumer such information as will result in increased use. Special literature on the range of spray uses, such as is given out for paints or fertilizers, might well be made available to him for customer distribution. Some local radio advertising was reported to have attracted attention of a few spray users.

Although the writer is naturally biased on the subject, it is nonetheless felt a significant source of spray approval has been overlooked in neg-

A survey shows only small brand preference in insect sprays, little knowledge of retail price range, and that the housewife buys what the dealer recommends . . . second in a series of two articles

## In The Front Line Among Pesticides

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THE WORLD'S LARGEST BOTANICAL DRUG HOUSE

lecting the male partner of the family. He would be the natural one in many instances to assist in the garden and other outdoor use of spray. It seems to be a fact, also, that the majority of women have a marked antipathy toward these outdoor crawling and wriggling insects. One may well wonder if a bet has not been overlooked in this direction, and that a proper appeal to masculine intervention would receive a great deal of attention.

It was impossible to secure an accurate picture of the price paid and the amounts of spray purchased from the housewives. Apparently their ideas of what would constitute a low or high price for a pint or quart of spray are quite hazy, as is the idea of what qualities in the sprays offered for sale might account for the range of price differences. One gets the impression, however, that initially the housewife with an insect problem is apt to purchase a pint of whatever insecticide she finds on the shelves of her grocery store, and pay the price asked without much question, and regard it as an experimental purchase. Or she may not know the market range of retail prices, and may not know whether the 35 cents which she paid for a pint can is above or below the average. Or she may believe that all sprays sell for about the same price. And on the whole, she does not remember what the price was for very long after she has paid it. This should not be taken, the writer feels, that the housewife is not a careful and observant buyer. In the case of insecticides, at least, she seems to feel that she has so little information on the subject to judge by, that a process of "trial and error" in buying is about the only course she can follow.

As reported, prices paid ranged from ten cents to a dollar for spray. Prices paid for a sprayer were also within this range. It would seem, if anything, that a trend towards more spray for a given price rather than a drop in price of usual sizes, should do more to create increased use of spray. After all, a pint of spray does not go very far if the housewife is to get any real service out of it.

Some attempt was made to ascertain the customary level of house-

wife information on insects she might meet. Most housewives are familiar with the fly, the mosquito, the ant, the clothes moth, and the cockroach. The majority of women evidently never see a bedbug. Experience with most outdoor garden insects is scant.

This level of housewife information simply points the direction of consumer education to the further needed uses of spray. Housewives just are not generally aware of the possibilities of spray and often do not know what can be done about insects, even in emergency infestations of moths or roaches. Using liquid insecticide mainly as fly spray, they are at a loss at the threat of potato bugs in the garden or gnats over the picnic table.

Few housewives have used powder or emulsion insecticides for their home or garden plants. In a severe case, proprietary nicotine or pyrethrum or rotenone products have been brought in to meet an irritating infestation of garden insects. For the most part, no regular habits of spraying for garden insects have been developed by the housewife.

Most users could recall at least two different brands of liquid insecticide they had used. One of these often was from the group of nationally advertised brands, and the other a more or less a local product. In the instances where both of these had been tried by the housewife, she indicated little preference for either spray.

One housewife in particular had been a regular and enthusiastic user of liquid insecticide for several years. In conclusion and summary, the writer is glad to present her detailed individual response to the questionnaire. These are the most advanced views and should certainly form a significant pattern for manufacturers of sprays.

#### Reasons for Use

I HAVE used household fly spray primarily as a health protection to my family, particularly to my children, and chiefly because it is a convenient and time-saving way to deal with troublesome flies. If it were necessary, I would use the fly-swatter for the purpose, but because I know how

quickly and efficiently spraying works, I find it most annoying to be out of spray even for a few days in the summer. In other words, continued use has made spray one of my necessities. A secondary use has been for protection against damage to clothes from moths, and against injury to my flower garden and house plants from outdoor insects.

Most wide use has been for flies, which are especially a problem to me because I have small children who love to rush in and out of the house from their play outside, and seem to have a propensity for pausing for conversation at the door with the screen wide open. I have also used it to spray their fenced-in playground before I put them in it, and found it seems to keep mosquitoes and flies from troubling them for quite a length of time. In one locality where I've lived, because of lakes in and about the city, mosquitoes are an outstanding nuisance, even in the sunlight and in daytime. I discovered that if I sprayed my small son's legs and sun suit before sending him outside to play, he got comparatively few bites, and was much less apt to complain of "bees biting."

I also found it a great deal of protection to do the same thing to my own arms and legs before working in my garden or gathering flowers for my daily bouquet. We have found it such a convenience to have a sprayer along to spray the vicinity of the picnic table before eating, or when swimming or fishing in summer that it is included as a matter of course in our preparations. I remember a story told me by a woman who was telling of a picnic she had attended the previous day where she had been so uncomfortable because of mosquitoes that her enjoyment of the picnic was ruined. While the hosts had had a sprayer on hand, it was filled with a spray which smelled so strongly of kerosene that it was as objectionable as the insects.

In this connection, I remember going into an otherwise pleasant little bakery in a good neighborhood last summer, to find it buzzing with flies, and all the baked goods carefully protected by waxed paper. The proprietor complained of the trouble he was having to a prosperous looking middle-

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aged woman who had entered and who responded, "Yes, isn't it a nuisance at this time of the year. I tried sprays years ago, but I just couldn't stand the kerosene smell,—and of course you couldn't use it safely in a bakery." With which the baker apparently agreed. I have often wondered why liquid insecticide of a good quality is not more widely used in drug stores, lunch rooms, groceries, and other places where food and refreshments are handled or served. Do the proprietors know that liquid insecticides are safe to use and harmless to food? Evidently this is not generally realized either by housewives or the small store-keeper.

I have used spray effectively to combat cockroaches, and as a result have never had a permanent infestation. In these cases, I believe I have brought one or two roaches home in my groceries from the store, and that prompt use of the sprayer nipped the trouble in the bud. In conversations with other women I have learned that many of them have never thought of using a liquid insecticide for this purpose. In fact, they feel helpless and ignorant when confronted with the problem. They worry about using various dusts and powders they have vaguely heard mentioned somewhere, wondering if they are poisonous and really effective, and some appear to accept cockroaches almost as a necessary adjunct to life in an apartment building. I have never had any experience with bedbugs, but usually take the precaution of spraying the bedrooms thoroughly, especially around all cracks and crevices, before moving into a new dwelling place.

I recently had an interesting experience with crickets. In the fall of the year I discovered small holes in a couple of rugs in my sun room, and also in a child's sweater which was pretty thoroughly ruined and which had been left overnight on the floor. I discovered that the cause was young crickets which had come into the sun room from the nearby garden through a side door. My idea now is that the pretty songsters equal the clothes moth in destructiveness. Prompt use of spray cleaned them out, and I used it very copiously in the sun room for a time

afterwards to prevent any recurrence.

I have always made it a practice to spray woolen clothing before packing away into trunks or drawers, and occasionally spray my clothes closets just on general principles. I have had only one sad experience with moths,—and that in a closet which I neglected, and in which I stored some woolen things without spraying.

I have used fly spray successfully against aphids attacking my flowers, and on a few occasions on house plants; but always feel somewhat reluctant to do so in fear of damaging the indoors plants. One use has been very helpful,—when bringing flowers from the garden to arrange for bouquets, find that often I have brought in small ants or other insects, which can be quickly dealt with with a sprayer, but would be a problem to handle without one.

I like to spray my garbage can frequently in the summer. Although covered, it does seem to furnish a breeding place for flies. I have found spray helpful in cases where bees came into the porch, or wasps started to build nests near the house or garage. I am allergic to bees and wasps! I hesitate to go after them with a swatter, but feel more confident with a sprayer.

One day last summer when making grape jelly, I happened to be out of spray. Some small fruit flies had come in with the baskets of grapes and hovered above the table and about me while I was working. Their presence was very annoying until that afternoon when I got more spray and disposed of them within a few seconds. Flies of this sort are a pest during the canning season.

#### Manner of Use

YES, I spray directly at flies to get them down. I consider the recommended method of closing all doors and windows, and then filling the room with spray impractical, since so often I use spray to get rid of only two or three flies admitted by the children. I also discovered, on the few occasions when I have filled the room, that a noticeable film of oil is left on furniture and floors by such a procedure. In an emergency, when a newly pur-

chased puppy was discovered to be suffering cruelly from fleas, I have used my liquid insecticide successfully on him, but would ordinarily prefer powder for the purpose. However, I do spray his bedding regularly. I use a continuous sprayer, and keep it handy during the summer months. I also like to have it at least filled and not too inaccessible for occasional use during the winter should any danger of moths arise. I prefer a spray which is nearly odorless, or just faintly perfumed.

Yes, I definitely expect my spray to knock down and kill flies when they are sprayed directly. Usually my chief purpose in spraying is to get them out of the way quickly! I have noticed some difference in the strength of sprays I have used, but have never noticed any insects which were knocked down by spray later recover. My spray container is easy enough to open and pour from, but most sprayers I have used are not always so easy to handle. If closed tightly enough so that no leakage is apt to occur, I have often had to go to the basement for pliers to get it open. I also wish that sprayers were equipped with a hook so that they could be hung in some convenient place, as I find they take an inconvenient amount of space on my kitchen shelves, or cleaning closet.

I have tried several kinds of spray and found only one which was inefficient and objectionable. I happened to use it when the baby was in the room and he crawled under the table and sneezed. In general even if small children or babies were present in the room, they have shown no sign of irritation from spray. I have never contaminated food with spray though of course I do not spray the table directly after it has been set, or spray directly at a child who happened to be in the room. If I followed the usual directions, however, I would get the children and myself directly out of the room. Many times this would be very inconvenient.

Of course I know what is in the spray that kills insects and know that odor has nothing to do with this. One thing that I always wish to know definitely about a spray I use concerns

(Turn to Page 115)

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# ROTENONE DISPERSION...

A comparison study of two powdered aluminum silicates used as dispersing agents for rotenone

BY H. F. WILSON AND GORDON L. BENDER

GREENHOUSE experiments have shown that there is a wide variation in the toxic values of rotenone dusts used for pea aphid control when mixed with finely ground nonmetallic minerals of different composition and physical characteristics. During the course of these studies we have made a large series of comparisons between clays, talcs, pyrophyllite, Friarite, silica, diatomaceous earth, and limestone (calcium carbonate and calcium sulphate). All these materials were represented as passing through a 325-mesh screen.

Between materials particle size does not seem to be as important as some other factors. Within the same material, particle size appears quite important. If the particle size is above 50 microns, somewhat inconsistent results are obtained. If the particle size is 2 microns or smaller as in clays, the results are also inconsistent. Materials containing hard crystalline particles in between that range show less variation unless a preponderance of impurities are present.

The chemical composition seems to be important as it affects the physical properties of a ground mineral. Too much or too little of an element or combination of two elements causes wide variations in the dusting properties of mixed dusts. One condition in particular is the sticky consistency of some materials. Such materials usually give low electrostatic charges and do not disperse well on plants and insects. A high per cent of some elements may also cause some deterioration in the rotenone content of a mixed dust, al-

though it has not yet been clearly demonstrated what these elements are.

It is also known that there is considerable difference in the hygroscopicity of different talcs and clays, that this is important in the dispersion qualities of insecticidal dusts. Materials that are highly hygroscopic generally do not disperse as well as those that are less hygroscopic. The colloidal quality and degree of flocculation possessed by a powdered mineral may also be important in the dispersion of mixed dusts. It has been noted that some mixed dusts do not disperse well but tend to flocculate instead of being dispersed in a finely divided condition. Whenever this happens the resulting control is low. This condition is particularly true of most clays.

Laboratory studies show that all sedimentary clays so far studied generally produce poorer control values with rotenone than do clay-group materials from rock material such as pyrophyllite and Friarite.

A kaolin clay, one of the best of a series of clays having a particle size of 2 microns or less was compared with a sample of pyrophyllite, which contained particles ranging from 2 to 40 microns. The chemical composition was somewhat similar except a wide difference in silica and alumina content, and considerable difference in ignition loss.

The chemical composition of the two materials was given as follows:

	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	CaO	MgO	TiO <sub>2</sub>	Na <sub>2</sub> O	K <sub>2</sub> O	Ig. Loss	PH.
Clay .....	45.25	39.03	0.7	0.05	0.03	1.30	0.16	0.11	13.76	5.
Pyrophyllite ...	70.15	23.84	0.07	0.06	0.02	0.15	0.20	1.54	4.0	6.9

*Abrasion effects.* All mineral diluents are more or less abrasive and some are more so than others. Pyrophyllite is naturally more abrasive than clay because of the larger angular particles. A discussion of the abrasive effects of these and other materials will appear in a later paper.

*Electrostatic charge effect.* The clay produced not more than 500 volts and this charge was less when 2 per cent oil was added. Pyrophyllite produced approximately 7,000 volts and when oil was added the charge increased to approximately 10,000 volts.

*Dispersion effects.* The clay showed poor dispersion and a tendency to flocculate on the upper surface of the leaves. Pyrophyllite showed a very fine evenly divided dispersion on the stems and upper and lower surfaces of the leaf.

## Method of Procedure

Fifteen different chemical compounds were used as conditioning agents in making the comparisons. SAE 10 lubricating oil was used as the control and replicated six times with both materials. Each dust contained .1 of 1 per cent rotenone and 2 per cent of the conditioning material. The dusts were made in 25-gram lots by mixing the ground cube and dispersing agent by mortar and pestle, and then adding the conditioner by means of a glass dropper. The mixing was continued until the conditioner was com-





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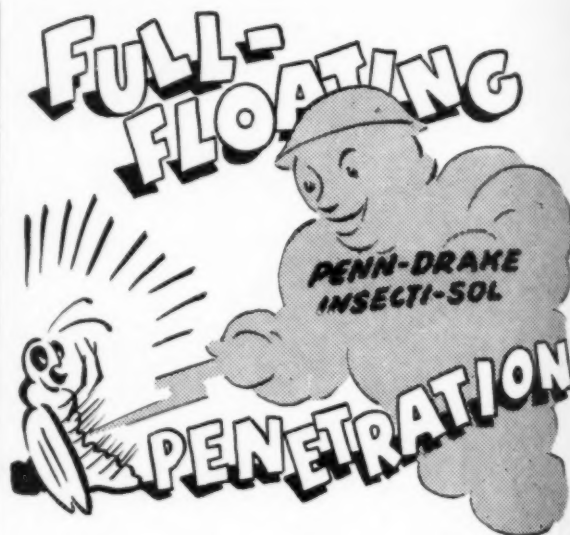
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pletely incorporated and no aggregates could be found.

Three uniform plants about six inches high and each infested with 20 fourth-stage aphids were used for each test. Each plant was dusted with a half-gram dose under a bell jar with a dust ejector which blew the dust against the top of the bell jar and caused it to spread over the plant. Pounds of pressure were used in forcing the dust through the ejector. The plants were removed as soon as the dust was applied to avoid settling effects. As soon as the plants were removed from the dust chamber they were covered with a screen cage to prevent aphid escape. Records were taken at 24-hour periods up to 72 hours when the final record was made. With Wetanol the plants were wilted in 48 hours.

The results are given in the following table:

Material	% Control
Ammonium Hexaphosphate Dinitride (Victor Chemical Co.)	
Pyrophyllite + A. H. P.....	38.34
Clay + A. H. P.....	50.00
Virifoam A (Glyco Products Co.)	
Pyrophyllite + Virifoam A....	50.00
Clay + Virifoam A.....	33.34
Santomerse D (Monsanto Chemical Co.)	
Pyrophyllite + Santomerse....	65.00
Clay + Santomerse.....	51.67
Immersol T X (Nyanza Color Co.)	
Pyrophyllite + Immersol.....	26.67
Clay + Immersol.....	40.00
Naccosol A (National Aniline and Chemical Co., Inc.)	
Pyrophyllite + Naccosol.....	16.67
Clay + Naccosol.....	33.34
Propanediol	
Pyrophyllite + Propanediol....	83.34
Clay + Propanediol.....	80.00
Wetanol (Glyco Products Co.) (48 hr.)	
Pyrophyllite + Wetanol.....	5.00
Clay + Wetanol.....	31.67
K-58 (Dow Chemical Co.)	
Pyrophyllite + K-58.....	95.00
Clay + K-58.....	56.67
Lethane 384 (Röhm & Haas Co.)	
Pyrophyllite + Lethane.....	100.00
Clay + Lethane.....	55.00
Diglycol Laurate (Beacon Co.)	
Pyrophyllite + Diglycol Laurate .....	78.34
Clay + Diglycol Laurate.....	48.33
Penetrol (Kay-Fries Chem. Co.)	
Pyrophyllite + Penetrol.....	43.33
Clay + Penetrol.....	48.33

Material	% Control
Triton N. E. (Röhm & Haas Co.)	
Pyrophyllite + Triton.....	28.34
Clay + Triton.....	21.67
D. H. S. Activator (Hercules Powd.)	
Pyrophyllite + D. H. S.....	76.67
Clay + D. H. S.....	16.67
Mineral Seal Oil	
Pyrophyllite + M. S. O.....	60.00
Clay + M. S. O.....	20.00
Pyrophyllite + SAE 10 replicated 6 times.....	89.17
Clay + SAE 10 replicated 6 times. 24.72 6 replicated checks—3 plants each .....	4.01

## Discussion

Seven powdered and eight liquid compounds were used in addition to SAE 10 lubricating oil. When the powdered materials were used, the differences were more or less irregular. The clay gave better results with four of the powdered conditioning agents while pyrophyllite was better with only three. When the liquid conditions were used, pyrophyllite was significantly better than the clay. An average of six replicates with SAE 10 oil showed a difference of 65 per cent in favor of pyrophyllite. An interesting development was the high control secured with K-58, Lethane 384, and propylene laurate. Diglycol laurate, D. H. S. activator and mineral seal oil did not show as well as SAE 10 oil.

## Agricultural Insecticides

(From Page 94)

cular 62 of the Nebraska station at Lincoln, under the title "Control of Stored Grain Pests in Nebraska." Another Nebraska entomological publication is Circular 61 on "Control of the Chinch Bug in Nebraska."

Idaho insect control problems were numerous and varied. Several pyrethrum and rotenone-containing dusts were tested to determine their relative effectiveness against Lygus insects that attack alfalfa. "A dust prepared from one part dry pyrocid and seven parts talc," says the report, "had approximately the same toxicity to adults as a cube-sulfur dust containing 0.88 per cent rotenone, but was more effective against the nymphs. The addition of 3 per cent pine oil did not increase the toxicity of the cube-sulfur dust. A dust prepared from dry pyrocid, cube, and talc, containing 0.25

per cent pyrethrins and 1.00 per cent rotenone was extremely effective against adults and was the only dust that gave satisfactory kills of nymphs. Dinitroorthocyclohexylphenol and a Paris green-sulfur dust were relatively ineffective against both adults and nymphs."

Tennessee Experiment Station investigated the insecticidal value of stomach poisons during which some new principles were established relative to the median lethal dose, but space is lacking to report this data in detail.

Alabama Polytechnic Institute at Auburn, Ala., includes in its report of entomological investigations, a paragraph which may be of significant interest to insecticide manufacturers. "Commercial samples of rotenone-sulfur dusts, which were giving unsatisfactory control of vegetable insects in Alabama," says this southern institution's associate entomologist, F. S. Arant, "were found to be in poor mechanical condition. The mixtures were lumpy and uneven and contained commercial sulfur flour rather than a dusting grade of flour."

And the industry will find another interesting comment in a West Virginia Experiment Station discussion of "What About Non-Poisonous Sprays?" It follows: "Our research with different spray materials points to nicotine compounds as most effective in controlling codling moth, but as long as the cost is out of proportion, we can't recommend them. Arsenate of lead, the usual standby, in a schedule of four or five cover sprays, did not equal nicotine combinations applied in eleven cover sprays, but the arsenate was by far the best material tests when all materials went through an equal number of applications.

"The long and short of it is that the non-poisonous insecticides are not yet developed to the point where they are commercially acceptable in the Cumberland-Shenandoah region. As a matter of fact, as long as fruit-washing is practiced and the tolerance of residues is not held too low, there is less need for substitutes for the poisonous sprays. Just the same, we are keeping up with our search for safe, economical and effective substitutes."

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# NEWS

## Insecticide Committee Meets

The Household and Industrial Insecticide Manufacturers Industry Advisory Committee of WPB is meeting in the Social Security Building, Washington, D. C., on October 6, at 10:00 A.M. Subjects to be considered are higher costs due to standardization of glass containers for insecticides, and the substitution of other materials for metals in containers and sprayers, Army and Navy insecticide specifications, and the possible further restriction of rotenone and pyrethrum supplies. The last previous meeting of this industry advisory committee was on September 1.

## Allocate Phosphorus

Allocation control of yellow and white phosphorus began October 1, under provisions of order M-230, issued September 9, by the WPB. Persons seeking allocation must apply on Form PD-66 and suppliers are required to report monthly on Form PD-601. Persons seeking 1,000 pounds or less of phosphorus in any one month may obtain delivery by certificate to their suppliers and need not file PD-600.

## C. W. Crowell Made Colonel

Clarence W. Crowell, formerly chief chemist for the Rochester Germicide Co., Rochester, N. Y., who has been serving as a lieutenant colonel in the Chemical Warfare Service since October, 1940, has been promoted to full colonel. He is serving in Washington as executive assistant to Brig. Gen. Paul X. English, Chief of the Industrial Service.

## NAIDM Board Meets

The regular fall meeting of the Board of Governors of the National Association of Insecticide & Disinfectant Manufacturers is being held on October 7, in Baltimore, according to H. W. Hamilton of the White Tar

Co., Kearny, N. J., secretary. The meeting of the Board will be held in the Tea House of the McCormick



JOHN N. CURLETT

Building, Baltimore, on the invitation of Charles P. McCormick, president of McCormick & Co. and a former president of NAIDM. John N. Curlett, vice-president of McCormick & Co. and current president of NAIDM, will preside.

## Chipman Exhibits Weed Killer

Chipman Chemical Co., Inc., Bound Brook, N. J., had an exhibit of their "Atlacide," chlorate compound for killing weeds at the annual convention of the Roadmasters and Maintenance of Way Association in Chicago last month. Company representatives from the Chicago office were in charge.

## Conduct Flooring Tests

A new type of testing machine has been constructed for the National Bureau of Standards of the Department of Commerce for determining the relative slipperiness of various flooring and decking materials. Tests of a number of waxes and finishing materials are contemplated, the work being done for the Maritime Commission and the Federal Inter-Depart-

mental Safety Council. According to word from the Bureau, it is probable that the results of some of this work will be made public. While much work has been and is being done by various floor surfacing manufacturers in this same direction, the Bureau indicates that results have suffered from the lack of an accurate method of comparison. When the Bureau's report is issued, it is hoped that it may serve as a satisfactory basis for purchasing floor compounds.

## Hollingshead Open New Service

A new "factory housekeeping" service has been instituted by the R. M. Hollingshead Corp., Camden, N. J., according to an announcement by Stewart Hollingshead. As explained by William F. Plowfield, industrial sales manager for the firm, the new service is in charge of Mrs. Vida Cole, plant safety and sanitation expert and former magazine editor and writer. The procedure is to visit plants and spend a day or several days as needed in a complete inspection and study of sanitation and general housekeeping conditions, and subsequently to analyze the findings, submit a report diagnosing faulty sanitation conditions and making recommendations for their correction. The new service is being advertised in plant and factory management magazines. In connection with its "housekeeping service," Hollingshead will begin publication in January, 1943, of a new house magazine, "Whizdom," to be supervised and edited by Mrs. Cole.

## Sanitary Products at Food Show

Two manufacturers of polishing waxes and one producer of pest control products were represented in the trade show staged in connection with the convention of the National Food Distributors Association in Chicago, Aug. 19 to 22.

The House of Bristol, Milwaukee, Wis., exhibited "Bristol Red" water wax, with Mrs. Charlotte Bristol, the originator, in charge. The preparation is a concentrated liquid wax which is diluted in water for application on furniture, automobiles, leather,



## *Electric Endosmosis* and **SOAP FILMS**

**I**T HAS been generally observed that some soaps are milder in action than others. The reason some soaps *sting* has been ascribed to hydrolysis.

But, hydrolysis cannot be the only answer because all ordinary soaps hydrolyze.

CLIFTON'S chemists have developed an interesting hypothesis based on *electric endosmosis*:

According to this theory, membranes in water in slightly alkali solution would absorb some of the negatively charged particles (alkali particles). Some membranes absorb more than others. It would seem likely from this theory that bland oil soap membranes such as olive oil would absorb a larger amount and thus leave the remaining solution milder than membranes made of lauric acid soaps (cocoanut oil).

### **CLIFTON PRODUCTS**

Vegetable Oil Soaps	Green Soaps
Liquid Hand Soaps	Liquid Floor Cleansers
Coal Tar Disinfectants	Cresol Solutions
Pine Disinfectants	Rubless Waxes
Furniture Polishes	Perfumed Deodorizing Sprays

**CLIFTON**  
**CHEMICAL CO., INC.**  
248 FRONT STREET  
NEW YORK CITY

**A  
DEPENDABLE  
BULK SUPPLY**

## **WAXES**

**HEAVY DUTY • SELF-POLISHING  
WATER EMULSION TYPES**

Have superior non-skid properties and will stand up under heavy traffic.

**CEDAR OIL POLISH**  
CONTAINS GENUINE OIL OF  
CEDAR • LEAVES CLEAR, DRY,  
NON-GREASY SURFACE . . .

For Floors, Furniture and Woodwork.

**CREAM FURNITURE  
POLISH**

**HIGHLY REFINED EMULSION  
TYPE • WAX CONTENT . . .**

Leaves rich, dry, glossy, waterproof finish.

**DEGREASING  
COMPOUNDS**

**EMULSIFY 100%**

**SAFE • NON-INFLAMMABLE**

Cuts degreasing time and costs in half. Does the toughest cleaning job with a degree of ease and speed never before considered possible.

Hollingshead, one of the leaders in the sanitary maintenance products field, is in a position to supply the above items in drum quantities. Here is a real opportunity for sanitary supply institutions who have facilities for repacking their own materials. Generous samples gladly sent to rated companies. Write for complete details.

**R. M. HOLLINGSHEAD CORP.**

Industrial Division

Camden, N. J. • 19 Rector St., N. Y. C.



upholstery, woodwork, porcelain and other surfaces. It is available in 4, 8 or 16-oz. bottles. The product has been on the market five years, Mrs. Bristol said.

Wilbert Products Co., Inc., New York, exhibited "No-Rub" floor wax and furniture polish and a line of shoe polishes, with S. Weinberger, sales manager in charge. Demonstrations of the shoe polish were made by a negro porter without charge.

Chase Products Co., Maywood, Ill., displayed "Chase's" ant killer, a liquid preparation available to merchants in attractive counter display cartons; also "Chase's Rat Kisses," a prepared bait, and "Chase's" Red squill, in powdered form. C. W. Chase, company president, said he has been in business fifteen years. Copies of *Chase's Pest News*, house organ for dealers, were distributed.

#### Robert W. Laing Dies

Robert W. Laing, 50, head of the Laing Exterminating Co., Cleveland, died suddenly in his sleep September 20, of a cerebral hemorrhage. Well known throughout the exterminating and pest control industry, he was one of the charter members of the Pest Control Association, a director, and a member of many association committees. In addition to his wife Helen, Mr. Laing leaves three children: Barbara, Helen, and Robert, Jr.

#### Scrap Committee Formed

The formation of a salvage committee within the essential oil, aromatic chemical and vegetable oil producers and dealers was announced last month at a luncheon meeting held in New York, Sept. 2. Members of the committee who will take an active part in this all-important work include: F. H. Leonhardt, Fritzsche Bros., Inc.; Harold L. Simons; J. B. Magnus, Magnus, Mabey & Reynard; M. G. Couderchet, Naugatuck Aromatics; Dr. B. H. Smith, Virginia Dare Extract Co.; G. Lowenstein, Fred Fear & Co.; E. D. Stults, Welch, Holme & Clark; and P. G. Brown. F. J. Lueders of Geo. Lueders & Co. is chairman of the committee.

#### Aid Insecticide Research

Monsanto Chemical Co., St. Louis, Mo., has donated an additional \$750 to the University of Illinois for the continuation of a cooperative investigation of insecticides which was started in 1941 with an original grant of \$4,500. At the August meeting of the University's Board of Directors acknowledgement was also made of an additional gift of \$150 from Liberty Chemical Co., Franklin Park, Ill., for an investigation of greenhouse insecticides which has been under way several years with the support of this concern.

Announcement was made of a gift of \$2,000 from the Diversey Corp., Chicago, for research in the use of various detergents, abrasives and other preparations for the cleaning of dairy utensils.

Velsicol Corp., Chicago, contributed \$1,100 for research in the insecticidal properties of certain hydrocarbon products which have been shown to have superior toxicity for certain insect pests. The specification was made that this is to be carried on under the direction of Dr. C. W. Kearns of the Dept. of Entomology.

Texas Gulf Sulphur Co., New York, donated \$3,500 for establishment of a three-year research assistantship in chemistry, beginning with the current fall term. Other gifts for fellowships in the field of chemical research included two totalling \$2,750 from E. I. du Pont de Nemours & Co.; another of \$1,500 from Allied Chemical & Dye Corp., and a third of \$750 per year from General Aniline Works, New York.

#### Chem. Salesmen End Golf

The fourth and final golf outing of the 1942 season of the Chemical Salesmen's Association was held September 15, at the North Hills Golf Club, Douglaston, L. I., N. Y. Winners among the 130 member and guest participants included: James Ferris of Niagara Alkali Co.; E. J. Maguire of the Graselli Division of E. I. du Pont de Nemours Co.; Charles Slater of J. T. Baker Co.; C. F. Trombley of Monsanto Chemical Co.; P. W. Hiller of

Innis, Speiden & Co.; Thomas Morgan of MacNair Dorland Co.; Harold Green of L. Sonneborn Sons, Inc.; R. E. Wilkins, of Hooker Electrochemical Co.; J. Huisking of Fritzsche Bros., Inc.; P. J. LoBue of Michigan Chemical Co.; Charles P. Alexander of Seldner & Enequist, Inc.; Thomas Callahan of Wishnick-Tumpeer, Inc.; S. F. Urban of E. R. Squibb & Sons; A. M. Osterndorf Commercial Solvents Corp.; and Ira P. MacNair of MacNair Dorland Co.

#### Girard Claims To Stop—FTC

Felix Girard Co., Minneapolis, maker of "Red Cross Rat and Mouse Embalmer," has agreed to stop making certain claims for its products that the Federal Trade Commission finds objectionable. These include the use of the word "embalmer," since the products do not embalm; use of descriptive claims such as "world's leading rodenticide," to represent their products as leading in volume of sales or effectiveness; use of the statement "each pound . . . is guaranteed to clear 5,000 sq. feet of infested floor space," including use of the word "guarantee" unless specific security is mentioned, and then only if the product lives up to it; use of the claim that it will completely exterminate all rodents in places where it is used; and use of unwarranted claims that disparage competitors.

#### Enjoin Former Grady Owners

Oil Specialties & Refining Co., Brooklyn, manufacturers of waxes, polishers and cleaners, obtained a court order September 15, stopping the former owners of the Grady Manufacturing Co., Long Island City, from using any of the trade marks or the name "Grady" in connection with the manufacturing, selling or handling of polishes.

#### Wm. H. Scheel, Inc. Moves

William H. Scheel, Inc., dealers in waxes and gums, have just announced that after September 28 they will be located at 38 Franklin Street, Brooklyn, N. Y. This move from 193 Water Street, New York City, consolidates the firm's entire facilities.

## Oil of White Cedar

A new raw material for Soap Makers and Perfumers. Entirely different from Oil of Red Cedar normally found on the market, it must be considered as a separate material.

Its bouquet is exceptionally fine; it blends with the Ionones; it is very stable in soap and gives an Orris-like character to Violet Compositions. It is very reasonable in price.

Oil of White Cedar offers unlimited possibilities to the perfumer. Its source is entirely within the U. S. A. and supplies are ample. The bugaboo of shortage need not worry the user of this material.

For fine results at reasonable costs and with safety as to source of supply this oil should be especially attractive.

*Aromatics Division*  
**GENERAL DRUG COMPANY**

644 Pacific St., Brooklyn, N. Y.

9 S. Clinton St., Chicago 1019 Elliott St., W., Windsor, Ont.

## GREATER Kills with CERTOX

REG. U. S. PAT. OFF.

**Rodent Seed, Ant Jelly, Arsenic, Carbolic, Pyrethrum, Cresylic, Red Squill, Derris Powder,** and other effective chemicals that do a thorough job for the Pest Controller. The quality of CERTOX products remains unaffected by the national emergency. Prices, too, are near normal.

### YOUR GUARANTEE:

All CERTOX products are manufactured according to exacting specifications under personal supervision of I. H. LUTAN, B. S. A., Entomologist.

**SPECIAL CONTRACT PRICES**  
Available to Cover your Annual Needs.

## YORK CHEMICAL CO.

Suppliers of Complete Exterminating Chemicals.  
424 West 18th Street, New York, N.Y.

Refined Dewaxed  
WHITE SHELLAC



MANILA GUM

### A Message to Manufacturers of Non-Rubbing Floor Waxes

Shellac, imported exclusively from India, is vital to the war effort and therefore under strict governmental regulation both with respect to its importation and marketing.

Manila Copal Gum stocks, normally imported from the Dutch East Indies and Manila, are already nearly exhausted.

The many GRP customers who have purchased these materials will understand our present inability to supply their needs and will, we know, appreciate the necessity of the fullest possible co-operation with our government in its efforts to win the war.

We shall look forward earnestly to a return of more normal conditions. May it not be long!

**GILLESPIE - ROGERS - PYATT CO.**  
80 John Street      Incorporated      New York, N. Y.

### New Insecticide Book

"Chemistry of Insecticides and Fungicides" by Dr. Donald E. H. Frear, Assistant Professor of Agricultural and Biological Chemistry at Pennsylvania State College has just been published by D. Van Nostrand Co., New York. The work is 300 pages about evenly divided between insecticides and fungicides. Although given over principally to agricultural products, the book also covers various household insecticide materials, pyrethrum, rotenone, fluorides, and their chemistry. Other chapters include the arsenicals, sulfur and sulfur compounds, fumigants, copper and mercury compounds, nicotine, and wetting, spreading and emulsifying agents and spray residue removal. A chapter is given over to a summary of analytical methods. Dr. Frear has done well in condensing an entire book shelf in one 300-page volume to produce a good text book for students of agricultural chemistry and also one which would be found unusually handy for reference around insecticide laboratories and plants.

### Chemical Show Stresses Salvage

The National Chemical Exposition, to be held at the Hotel Sherman, Chicago, Nov. 24 to 29, will have an educational exhibit sponsored by the War Production Board's Industrial Salvage division, which will stress the campaign now in progress to salvage essential chemicals often discarded by industrialists after a single use.

Reclamation of dirty or contaminated chemical solvents, oils and chemical by-products, will be demonstrated in an effort to speed up the national salvage drive; to acquaint industrialists with the urgency of putting an end to waste in their plants and to enlist their cooperation.

Another contribution designed to be of aid in the war effort will be a special exhibit of "alternates and substitutes," including substitutes for substitutes. A gallery of micrographs contributed by forty laboratories which are using the electronic microscope, will comprise still another featured display.

Exhibitors already assigned space number more than 100 firms in

the chemical and allied industries, including manufacturers of equipment, precision instruments, materials and products. The exposition is sponsored by the Chicago section of the American Chemical Society, of which Dr. R. C. Newton, vice-president of Swift & Co., is chairman. Victor Conquest, director of research for Armour & Co., is chairman of the Show Committee.

### Pea Aphid Conference, Nov. 7

The Wisconsin Pea Aphid Conference will be held in the Schroeder Hotel, Milwaukee, November 7, preceding the meetings of the Wisconsin Cannery Association Nov. 9 and 10.

### Control Naphthenates

New war demands have made existing controls over naphthenates insufficient, so the WPB has placed them under complete allocation, starting October 1. Order M-142 has been amended to bring the naphthenates under complete allocation and to continue allocation control of naphthenic acid. The order also is changed to provide for the use of standard chemical forms, PD-600 and PD-601, for the allocation of both naphthenates and naphthenic acids. Forms PD-438 and 439, previously used for allocation of naphthenic acid, will be discontinued. Naphthenates are being used increasingly as softeners and plasticizers for synthetic and reclaimed rubber.

### Name Flooring Committee

Committee members of the Floor Surfacing and Maintenance Machinery Industry division of the W.P.B. are: Ernest Cooper, Clarke Sanding Machine Co., Muskegon, Mich.; W. B. Crew, American Floor Surfacing Machine Co., Toledo, O.; Mrs. L. C. Fennell, Fennell System, Inc., Elkhart, Ind.; Robert E. Harris, Modern Floors Mfg. Co., Washington, D. C.; Fred. C. Hild, Hild Floor Machine Co., Chicago, Ill.; W. E. Holt, Holt Mfg. Co., Oakland, Cal.; Gordon E. Kent, The Kent Co., Rome, New York; Lloyd Hale, G. H. Tennant Co., Minneapolis, Minn.; R. F. Johnson, H. F. Staples & Co., Medford, Mass. N. G. Burleigh, chief of the Services Branch, is the Government Presiding Officer.

### AIFA Meets in San Francisco

Two meetings of the Agricultural Insecticide and Fungicide Association were held at the Palace Hotel in San Francisco, September 29 and 30. The meeting on September 29, which was scheduled for 10 o'clock, was to be presided over by J. B. Cary, president; H. C. Davies, vice-president; and L. S. Hitchner, secretary; all of the Association. Government speakers were listed as: Philip H. Groggins, Chief of Agricultural Chemicals Section Office of Agricultural War Relations; Dr. R. C. Roark, Bureau Entomology and Plant Quarantine, U. S. Department of Agriculture; Warren H. Moyer, in charge, Insecticides and Fungicides of the Agricultural Chemicals Unit, W.P.B.; and an unnamed OPA representative. The nature and purpose of this meeting were similar to those for the meeting held in August, at Spring Lake, N. J., which was reported in the September issue of *Soap & Sanitary Chemicals*.

The meeting on the 30th was arranged for primary manufacturers and government officials to get together and discuss their mutual problems and outlook.

### P.I.I. Meets Sept. 30

In order to have its meeting correspond with that of the Agricultural Insecticide & Fungicide Association, the Pacific Insecticide Institute changed the date of its annual meeting from the second Tuesday of October to September 30, at the Palace Hotel, San Francisco.

### Sanitary & Easterday Join

Sanitary Janitor Supply Co., Seattle, Washington, formerly located at 2500 Western Avenue, is now part of the Easterday Supply Co., 115 Pine St., Seattle, manufacturers of Super I Products, insecticides, deodorizing specialties and brushes of all types.

### Antz Joins Steadman

Charles R. Antz, for the past 35 years identified with the wax business, has just joined F. W. Steadman Co., New York, who deal in a complete line of waxes. Mr. Antz will be in charge of paraffine wax.



*You can get in on the*  
**GROUND FLOOR**

*With*

**BUCKINGHAM WAXES**

A crack investment! They pay dividends in profits, customer satisfaction and repeat orders.

Give your trade the best we've got and the best you can get. The BUCKINGHAM line is produced by a trained staff of wax experts and trouble-tested to insure user satisfaction.

Waterproof No Rubbing Liquid Wax  
Prepared Liquid Wax (the polishing type)  
Prepared Paste Wax  
Powdered Dance Wax  
Furniture Polish (White Emulsion)  
Metal Polish (Non-Settling)  
Gym Finish (Mopping Varnish)  
Floor Seal  
Scrub Soaps  
Pre-Wax Cleaner  
Bowling Alley Polish and Cleaner  
Wall Cleaner (Waterless)  
Liquid Hand Soap

**Buckingham Wax Company**

VAN DAM ST. and BORDEN AVE., LONG ISLAND CITY, N. Y.

*Manufacturers of a complete line of*

FLOOR WAXES and POLISHES—BULK and PRIVATE LABEL

*Warehouses and Stocks at*

1212 Mary Street  
Jacksonville, Fla.

1323 Wall Street  
Dallas, Texas



**"Good" Disinfectants**

Pine Oil Disinfectants Coefs. 3 and 4

Phenolic Emulsifying Disinfectants  
Coefs. 2 to 20

Soluble Cresylic Disinfectants  
(B.A.I. and Commercial Standard)

Saponated Solution of Cresol  
U.S.P. XI (Cresol Compound Solution)

All made under careful laboratory control. Phenol coefficients determined by LaWall and Harrison Laboratories.

**Other "GOOD" Products**

Insect Sprays	Vegetable Oil Soaps
Cattle Sprays	Liquid Soaps
Bed Bug Sprays	Scrub Soaps (Liquid & Jelly)
Agricultural Insecticides	Floor Wax and Polishes

**BULK PACKAGES AND PRIVATE LABEL**

**JAMES GOOD, INC.**

*Manufacturing Chemists—Since 1868*

2112 E. SUSQUEHANNA AVE.

PHILA., PA.

**F. & S.**

**Quality Colors**

*for*

**TOILET SOAPS**

**LIQUID SOAPS**

**TOILET PREPARATIONS**

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

**FEZANDIE & SPERRLE, Inc.**

205 FULTON STREET  
NEW YORK, N. Y.

*Import—Manufacture—Export*



# P.C.O.s Meet in Pittsburgh

THE twofold purpose of pest control, characterized as a "Wartime Necessity": A.) To protect the public health and B.) Conserve food and vital stores will be the keynote for the tenth annual convention of the National Pest Control Association to be held at the William Penn Hotel, Pittsburgh, October 26-27-28. Fourteen prominent speakers from various departments of national, state and civic government; private industry; university; and professional life are scheduled at this writing to address the first convention meeting since the United States has gone to war. There will be representatives of the WPB; U. S. Dept. of the Interior; U. S. Dept. of Agriculture; Pittsburgh Dept. of Health; Dept. of Entomology of Purdue University; U. S. Army; and the Nat. Ass'n of Better Business Bureau Managers.

As usual, there will be some form of entertainment each evening. The highlight of this year's convention, from the entertainment standpoint, will be the Hallowe'en Party on Tuesday evening. The annual banquet will be held Wednesday evening, October 28. The complete program of the convention follows:

## SUNDAY, OCTOBER 25

- 2:00 P. M. Informal reception; sight-seeing.
- 6:00 P. M. "Dutch Treat" dinner.
- 7:45 P. M. Board of Directors Meeting.
- 9:30 P. M. Order of Standbys Open House.

## MONDAY, OCTOBER 26

- 9:30 A. M. Registration.
- 9:30 A. M. Convention called to order. Louis Gatto, general chairman.

Address of Welcome. Mayor Cornelius D. Scully.

Response. Walter S. McCloud.

President's Annual Address. P. Calvert Cissel.

Secretary's Annual Report. William O. Buettner.

Treasurer's Annual Report. Albert M. Akers.

Memorial Service H. K. Steckel.

Introduction of Distinguished Guests and Visitors. William O. Buettner.

Address. Dr. I Hope Alexander, Director, Department of Public Health, Pittsburgh. "Pest Control from the

Point of View of a Public Health Official."

Committee Reports. Chairmen of Committees.



P. CALVERT CISSEL

Address. "Whither in Pest Control?" Professor J. J. Davis.

Business Session and Announcements. 12:15 P. M. Luncheon.

2:00 P. M. Convention reconvenes. F.

A.) Rodent Control.—"The Fish and Wildlife Service (Rodent Control Division) Brings Us Up to Date," F. E. Garlough. "Theory of Poisons and Fluorine Antidotes," Dr. James C. Munch. "A Permanent City Rat Control Project," F. E. Garlough and William O. Buettner. Panel Discussion—Questions and answers.—Ernest M. Mills, leader, assisted by Martin T. Meyer, George B. Lay, M. F. Levenson, George Dyar, and Harold Kaufman.

B.) Legislation and Specifications—William O. Buettner, presiding. "Comments on Existing and New Legislation," Lawrence A. McKenna, Ernest R. Barber and L. R. Alderman. "Specifications — Phraseology," Morton S. Prescott. "Phraseology for Legislative Proposals," G. Norman Dold. "Joint Committee Recommendations on Legislation A.A.E.E.—N.P.C.A.," Professor W. F. Flint and Dr. H. K. Steckel.

7:30 P. M. Booth Exhibitors introduced by William O. Buettner.

9:30 P. M. Two films: "Keep 'Em Out."

A rat control motion picture produced by the U. S. Public Health Service; "Fumigation," the Association picture.

## TUESDAY, OCTOBER 27

9:15 A. M. A.) War Production Board — Armed Services.

"The Chemicals Situation," Melvin Goldberg. "The Plight of a Service Industry," J. D. Vail, Jr. "Household and Industrial Insecticide Manufacturers

Advisory Committee," William O. Buettner. "The Control of Pests in the Sixth Service Command," Lieut. Irwin H. Gilbert. "The Navy and Pest Control," Harold E. Jennings.

B.) Termite Control.

"Termite Control Investigations," (Speaker from the Bureau of Entomology and Plant Quarantine to be announced). "Common Mistakes in Termite Treatment," George L. Hockenyos. "Springfield, Illinois Termite Tests," Mr. Berger. Questions and Answers. Bert Lewis, leader, assisted by George L. Hockenyos and Alfred Zimmern.

12:15 P. M. Luncheon.

"Food Relation to Fumigation," H. C. Patton. "Relation of Plumbing to Fumigation," Thomas G. English.

2:15 P. M. Convention reconvenes.

A.) Entomological and Research Activities with Relation to the War Program. "Some Unusual Calls for Help," Dr. W. E. Dove. "The War and Pest Control," (Probably) Dr. R. C. Roark. "American Association of Economic Entomologists," Dr. L. M. Peairs. "Insecticide Research," Dr. Oscar F. Hendenburgh.

B.) Fumigation Clinic. B. W. Eldredge, leader. "Chemical Phases of Fumigants," Dr. John H. Foulger. "Analysis of Accidents and Fatalities," Lothar Vogel. "Gas and Decontamination—Safety Practices," E. W. Gilliland. Questions and Answers. B. W. Eldredge, assisted by Max Rukin, Herman C. Miltzer, Dr. George B. Chapman, C. A. Vincent-Davies, and Conrad C. Johnson.

8:00 P. M. Hallowe'en Party.

## WEDNESDAY, OCTOBER 28

9:00 A. M. A.) Business Practices. "Analysis of Phraseology in Advertisements Appearing in Classified Telephone Directories," John G. Vogel and Martin T. Mayer. "Property Management and Pest Control," R. A. MacDowell. Panel Discussion. George R. Elliott, leader.

B.) Business Session.

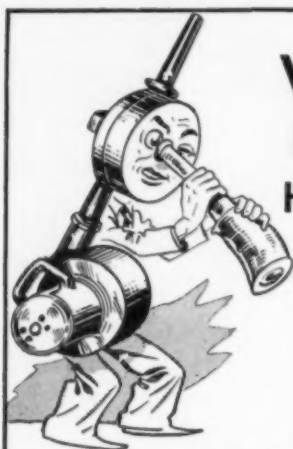
2:15 P. M. Convention reconvenes.

"What Good Business-Consumer Relations Mean to You," G. H. Dennison. "Insects and Rodents as Carriers of Disease," Dr. George L. Wessels. Discussion; unfinished business.

6:30 P. M. Annual Banquet.

## Check Wax Ceiling Prices

Through a series of individual conferences with manufacturers of floor waxes and polishes, the Office of Price Administration is checking on ceiling prices, costs, and other factors in connection with these products. These conferences are being held at regional offices of the O.P.A. by appointment with company representatives who are being called in by O.P.A. one at a time. In the New York region, conferences are being held during the early part of October at the offices of O.P.A. in the Empire State Building, New York.



## WAR PRODUCTION HAS CHANGED

our whole  
outlook  
and has stopped,  
for the duration,  
the output of  
ADAM A. BREUER'S

### ELECTRIC INSECTICIDE SPRAYER

WE are now in war production. Our output is being restricted to war essentials. We are doing our utmost to help our nation in its all-out war effort. Consequently, we have had to discontinue, for the present, the manufacture of Adam A. Breuer's ELECTRIC INSECTICIDE SPRAYER.

In addressing this message to our regular customers and prospective users, we are simply making clear our position, so that they will know how sincerely we desire to serve them and would but for the fact that Uncle Sam's demands must be met first. We look forward, however, to the time when we can again supply your needs in Insecticide Sprayers.

*We do not sell insecticides. Our business is the manufacture of Sprayers. (Patented in U. S. A. and foreign countries).*

BREUER ELECTRIC MFG. CO. 5118 N. RAVENSWOOD AVE. CHICAGO, ILL.



**Play Safe**—sell or recommend the 4 in 1 wherever your products are used.

- Used and approved by floor maintenance experts since July, 1939.
- Requires no metal whatever, thus assuring an unlimited supply in war time.
- A quality applicator backed by our many years' experience in the industry.
- Every square inch of the premium quality wool pad is usable. The 4 in 1 offers the best insurance that floor waxes, seals and other floor finishes are applied properly.

AMERICAN STANDARD MFG. CO.  
2509-13 S. Green St. Chicago, Ill.

## METAPLUS

a substitute  
or alternate

for

### TRI SODIUM PHOSPHATE

METAPLUS cleans better, costs less and is more available.

We guarantee METAPLUS to out-perform Tri sodium phosphate in any cleaning operation by itself or in mixtures.

Backed by twelve years' successful experience in the alkali cleaning field.

We have a very interesting proposition to offer reliable jobbers.

MACKENZIE LABORATORIES, INC.  
FRONT AND YARNALL STREETS  
CHESTER, PA.

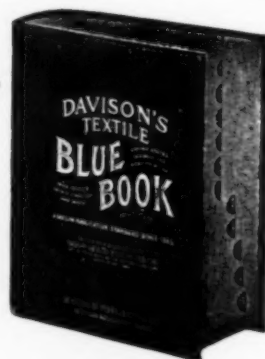
## Textile Plants Need Soap

ALMOST NINE THOUSAND Textile Mills, Dyers, Finishers, Bleachers and printers in the United States and Canada are fully reported in the new 77th Year Book. Many Mills and Dyers Buy Soap in large amounts!

In addition 30,000 associated firms are listed and reported—dry goods commission merchants, yarn, cotton, linters, silk, rayon, waste, wool, rags, fibres, machinery, chemicals, supplies and other allied industries.

77th Year

Issued  
annually—  
Supplement  
of New Mills  
and changes  
is sent to  
every sub-  
scriber free



77th Year

DeLuxe  
Office Edition  
\$8.25  
Thin Paper  
Handy Size  
\$5.75  
Salesmen's  
Edition \$1.50

New 77th Year Issue!

Over fourteen hundred pages in size, thumb indexed for quick reference, strongly bound and with information arranged for instant use, this volume will make money for your sales department.

### DAVISON'S TEXTILE BLUE BOOK

"A Davison Publication—Standard Since 1866"  
Executive, Sales and Production Offices  
RIDGWOOD - - - NEW JERSEY, U. S. A.

# REMEMBER?

10 YEARS AGO



C.C. BAIRD RECEIVED  
A GOLD MEDAL ON  
RETIRING AS PRESIDENT  
OF HOLBROOK, MASS.  
ROTARY CLUB



REQUIREMENT OF A FOOT  
BATH BEFORE ENTERING  
A SWIMMING POOL WAS  
BECOMING LAW IN  
SOME STATES



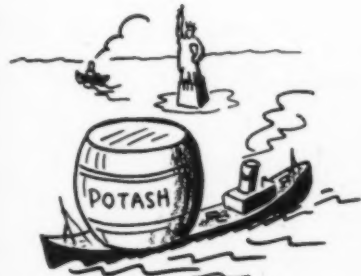
NEW 5% EXCISE TAX ON LIQUID  
SOAP AND SHAMPOO CAUSED A  
GREAT DEAL OF CONFUSION  
ON THE METHOD OF HANDLING IT



SON DAVID BORN TO  
THE JOHN POWELLS  
OF JOHN POWELL & CO.



S.S. SELIG OF ATLANTA  
RETURNED FROM PARIS—  
IN THOSE DAYS IT WAS FRENCH



OVER 99% OF TOTAL U.S.  
IMPORTS OF POTASH IN  
JUNE CAME FROM GERMANY  
—TOTAL WAS 197,886 LB.



SO  
LONG

"INFORMATION PLEASE"



BOARD EXAMINED APPLICANTS  
FOR EXTERMINATORS' LICENSES  
IN N.Y. STATE AND GAVE  
THEM A STIFF QUIZ



## ROTENONE and DERRIS RESINS

Manufacturers of finished insecticides have come, over a period of years, to look to DERRIS, INC. as headquarters for rotenone and derris products of all types. We are specialists in this field and are prepared to supply specifically compounded products made up according to each customer's varying needs.

**Timbo Powder — Derris Powder**  
*of Finest Grind*

**DERRIS, Inc.**

79 WALL STREET NEW YORK, N. Y.

**PRIVATE  
FORMULA  
WORK**

**Let us  
manufacture  
it for you!**

Those products which you are not equipped to manufacture yourself . . . those odd items which do not fit into your plant . . . mosquito repellent, flea powder, salves, ointments, tube filling, powder filling, etc. . . . we buy materials, containers, pack, store, and ship your specialties . . . most modern methods and equipment . . . strictly confidential . . . and our charges are low . . . consult us without obligation.

**R. Gesell, Incorporated**

*formerly Ehrmann-Strauss Co., Inc.*

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# Canada Restricts Rotenone

**R**OTENONE has recently been restricted in Canada to use as a delousing agent or for medicinal purposes for the army, or as a means of controlling cattle flies and insects affecting crops. This order, promulgated by the Wartime Prices and Trade Board on August 19, provides, however, that retailers can sell whatever packaged rotenone they had on hand at the time the order was published. Also, anyone purchasing rotenone preparations can use them for the purposes for which they are registered under the Canadian Pest Control Products Act. It is further provided that the Administrator of Fertilizers and Pesticides can authorize use of rotenone for whatever purposes he sees fit.

On pyrethrum, no official or unofficial restrictions have been applied yet, this for the reason that United States' control has been effective and there is no great stock on hand in Canada.

Metal containers for pesticides (insecticides in Canada) have been reduced to a rock bottom minimum, and although there is no order restricting their use, they are said to be available only for the most essential needs. At a container committee meeting held recently in Montreal and attended by numerous representatives of insecticide firms, eight points were composed to serve as the basis of a questionnaire sent out by the Pesticide Administrator to determine the container needs of the trade. The eight points were:

(1) In view of the statement of the Administrator of Metal Containers that the use of such containers will be based upon their essentiality, in the strict sense of the word, there would be no choice but to use glass to the fullest extent. That is, in all sizes less than one gallon. (2) That to fill orders over one gallon, two or more glass containers would be used. (3) Glass bottles would need to be packed in corrugated containers. (4) That the Administrator would be asked to allow for higher prices as glass bottles would cost at least 50 per cent more than tin cans of equivalent size. (5) The return of used containers would be an impossibility, but the Adminis-

trator might issue an order making it illegal to break or willfully damage them, and requiring their return to commercial channels through the ordinary processes of salvage. (6) Bottle sizes should be confined to three of the following for each manufacturer: 8, 16, 20, 32 and 40 ounces. The Administrator would be asked to arrange the supply of metal caps for these sizes. Standard peroxide amber bottles should be used. (7) The trade is to be questioned and a confidential return obtained to enable an estimate of quantities of glass bottles to be made. The Administrator will be asked to ensure an ample supply. (8) For five-gallon metal containers terne or black iron is satisfactory for most pesticide products. No other size of metal container will be asked for, but deliveries made by using the appropriate number of five-gallon sizes.

The questionnaire was sent out by A. M. W. Carter, Pesticide Administrator, who states that he found that the findings meet the situation and assumed that they would be adopted by the trade at large. He asked that

## Insect Sprays

(From Page 99)

itself not only with the way it kills insects, but its safety when used around food or humans. Secure in this knowledge, it is much more useful to me than if or when I have doubts. From conversations with other women, I am convinced that lack of information or vague misapprehensions on this score are one reason for failure to use spray or for using it very sparingly. In my case I consider spray a necessity item rather than a luxury item. This is from the point of view of convenience and saving time, as well as health.

I've tried many kinds of spray and found the majority of them about equally satisfactory. There is no particular brand which I prefer. It's unusual that while for the past few years I've been particularly interested in insecticides, and therefore on the alert, I have seen or heard but little advertising concerning them over the radio, in newspapers and magazines, or as displays in stores. Most of what I did notice, I felt was ineffectual. The one exception was a company serving

the trade send in data on their expected annual needs for bottles. Companies using seconds of other sizes and shapes than the five standard bottles listed above may do so as long as they are obtainable. He also asked that manufacturers state their expected annual needs for metal containers, specifying tin, terne plate or black metal. Tin will not be obtainable unless essential in the strict sense of the word. Since pyrethrum may be nearly unobtainable there is expected to be little demand from this direction for tin containers. Available substitutes can be carried in terne or black metal. Manufacturers of weed killers, of lime sulfur solution and of certain fumigants are in this category and have been invited to particularize on the numbers and sizes of special containers they use annually.

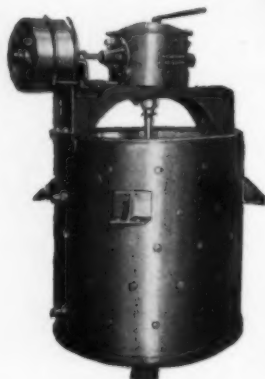
Dr. R. A. Diehm, formerly associated with Rohm & Haas, Philadelphia, has been appointed technical director for the Container Corp. of America, with headquarters in Chicago.

a small local territory which had good radio advertising followed through with newspaper advertising, and had displays in almost every drug and hardware store in the city. These advertisements were in the nature of an educational campaign to the public, repeated frequently enough to demand attention.

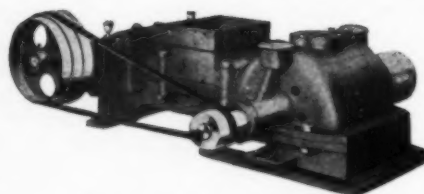
I prefer to buy my spray in a grocery store where I do my usual weekly shopping. The local merchant has not influenced my choice of spray beyond having available the kind I like to purchase. My husband is interested in the outdoor use of spray for the garden and mosquitoes, but does not use it in the house at all. I pay in the neighborhood of fifty cents a quart for spray and about the same price for a sprayer.

I can recognize all the insects mentioned except the carpet beetle. I have never used powder or emulsion spray on outdoor plants. I have used both local and nationally advertised brands of spray. My preference depends upon the efficiency of the spray and the dependability of its safety when used around people.

*Special Offerings of* **SOAP MACHINERY** *Completely Rebuilt!*



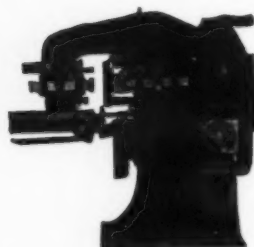
Newman's BRAND NEW  
Steel Steam Jacketed  
SOAP CRUTCHERS  
Sizes 1,000 to 10,000 lbs.



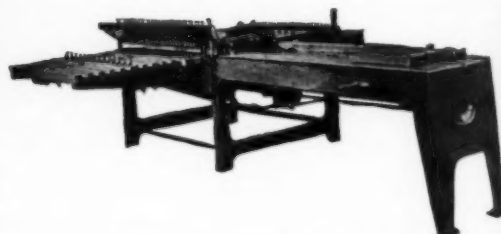
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unconditionally guaranteed.



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toilet soap presses. All com-  
plete and in perfect condi-  
tion.



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ages guaranteed in per-  
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110 East 42nd Street

New York

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"Calm down, Cuthbert, the worst shortage is yet to come,—a worse shortage of Customers!"

*... what, no customers?*

**B**AD as it was to be all sold up and have nothing further to offer your customers, infinitely worse is to have lots of goods and no customers. And this can happen to anybody, large or small. The time-tested method of insuring against a future "no customer" situation, is regular advertising in representative trade papers.

Now, in the field of soap products, insecticides, disinfectants, sanitation and chemical specialties, the best safeguard against a "no customer" future is in our opinion regular advertising in

**SOAP and Sanitary Chemicals**

254 WEST 31st STREET

NEW YORK

*Member Audit Bureau of Circulations*

## Tale Ends

**T**HE five-cent processing tax on coconut oil of non-Philippine origin has been reduced to three cents until June 30, 1944, or sooner. Even with this as an inducement, we do not look for the American market to be exactly flooded with coconut oil or copra in the near future.

Something like 100,000,000 pounds of soap a year will be required by the Baruch synthetic rubber program. Roscoe Edlund of the Association of American Soap & Glycerine Producers has prepared a memorandum on the subject and copies are available to soapers.

Word has come that manufacturers who plan to use wooden barrels and wood kits, and who have not been buyers of these containers in the past, would be wise to purchase a few and establish themselves on customer lists of suppliers. This may avoid disappointment later if wood barrels are needed.

Investigation of shampoos in retail establishments is reported under way by some government department, as yet undetermined but variously reported as the OPA, FTC and the Department of Agriculture. Purpose evidently is to check anhydrous soap content, glycerine content, and label claims.

Any extension of inventory restrictions may find some small soap and other manufacturers in a bad way when it comes to meeting increased taxes in 1943. After all, Uncle Sam insists that his taxes be paid in cash.

Right now, at the rate things are developing in Washington, we suggest that you do not miss any copies of *Soap & Sanitary Chemicals*—make sure that your subscription is paid,—when you receive a subscription renewal blank, send in your check at once before you forget it. Don't miss any issues as there is no assurance that we can supply them to you later!



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er, 1942

**Perfuming  
problems?**

**... call in  
UNGERER!**



Each succeeding month brings new problems to soap manufacturers. Severe competition has always existed in the sale of soaps. But today, raw material difficulties complicate the sales problem. Nevertheless, there can be no let down in quality if you would maintain your sales position.

Perfuming problems are not the least of those facing soap makers. But knowledge and experience can be of great help, — the kind of experience which Ungerer has in the field of perfuming. If you have a perfuming problem . . .

**"...call in UNGERER!"**

**U N G E R E R & C O .**

161 SIXTH AVE., NEW YORK, N. Y



WHEN it comes to chemical warfare against *obnoxious odors* common to the basic ingredients of insecticides and other technical products, M M & R IS A VETERAN, cited many times for *conspicuous* service over and above the usual call of duty.

Such widely used M M & R odor killers as DEODORANT L37 and NEUTRALIZER No. 202 have routed numerous *undesirable* odors . . . accomplishing the task at a cost so *small* as to emphasize the efficiency and value of these *positive* neutralizers that deodorize without perfuming.

Whenever the assignment has been one of *perfuming* as well as *neutralizing*, PERFUME OIL SWEETGRASS M M & R and BOUQUET B. L. S., have been outstand-

ing among M M & R's many effective *double-duty* performers.

If your order of the day is, "*A more positive deodorant or perfume oil at less cost*" then M M & R can serve you well. We invite you to send us a pint or two of your unperfumed spray (or other technical products); with a notation regarding contents; and your requirements checked as follows:—

Neutralize odor without perfuming

Neutralize odor and perfume

Our budget is . . . . . per gallon of spray

There's more than one good reason to expect that the returned samples will satisfy you *on every score*.



# MAGNUS, MABEE & REYNARD, INC.

QUALITY ESSENTIAL OILS, BALSAMS, AROMATIC CHEMICALS, BASIC PERFUMES, FLAVORING MATERIALS . . . SINCE 1895

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